Workbench

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(Part I)

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HOW YOU CAN BEAUTIFY YOUR KITCHEN WITH CASTOGLAS

Figure 1

With this New Liquid Plastic you can make your own glass-smooth, acid and heat resistant countertop—the translucent glass room divider with REAL flower and leaf embedments—the handsome decorative tiles. Not only can you embed natural flowers but you can also form life-like, strikingly beautiful glass flowers and leaves with Castoglas as illustrated on this page. Versatile? It surely is. Few other materials can be used for so many practical and decorative applications as liquid Castoglas.

No Tools Are Needed—No Equipment—No Heat—No Pressure—No Previous Experience

Working with Castoglas is so astonishingly simple that anybody can do it. Take the countertop, for example. The idea was suggested by Merlin Felt, one of our Crafts customers, who remodeled his kitchen last year. We were so impressed with his work that we want to tell you about the wonderful possibilities. For the top, he cut solid flakeboard to fit and then poured the liquid Castoglas over the sanded surface before installing it. The color and pattern of the composition wood are beautifully enhanced under the glass-like Castoglas finish. Please note that Castoglas is not a varnish or similar finishing material. If it were possible to separate it from wood, it would look and feel like a thin sheet of clear plate glass. When installed, the entire U-shaped counter is one solid piece without seams, without metal strips or other edging materials that so frequently tend to loosen in time.

How much does the Castoglas cost? Less than $10.00 for the entire counter . . . about 21c per sq. ft., just a fraction of what it would cost you for a counter of comparable quality if you could buy it.

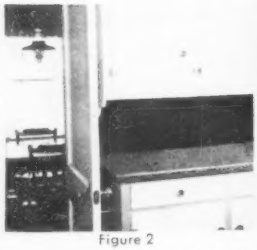
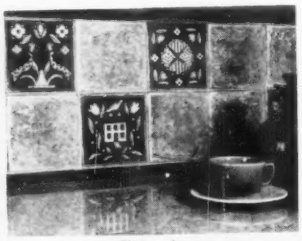


Figure 2

Figure 3



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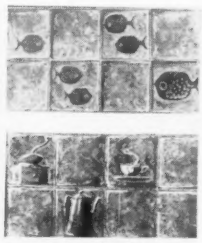


Figure 5 and 6

Figure 7

ABOUT THE PICTURES

1. The remodeled kitchen—new Castoglas-finished Counter, new Castoglas Room Divider, new Castoglas Tiles.

2. The kitchen was too dark before it was remodeled.

3. Pattern of dining room wallpaper, repeated in a few of the kitchen tiles.

4. Notice the reflection of the tile in the glass-like counter. If you prefer, you may also have a dull finish.

5. & 6. Indulge your personal taste with original designs to match or complement features in your home or surroundings. We'll tell you all about this fascinating craft.

7. The 6x6 inch design is glued to hardwood, covered with Castoglas and then applied to the wall. These tiles also make fine trivets, trays and coasters.

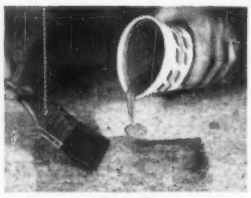
8. Castoglas being poured upon the sanded flakeboard surface.

9. You can also laminate silk-screened paper or fabric directly upon the wood.

10. The untreated surface of the wood block at left is porous and soft • Block at right is Castoglas treated • Mix colors of your choice with the liquid resin and obtain a rich finish similar to the black marble-like effect of the sample at lower left • You are not limited to paper patterns. Imagine a table top with brilliant fall leaves preserved forever under a layer of Castoglas.

11. Seeping water under the metal sink will never deteriorate the Castoglas-treated wood surface.

12. Glass flowers as delicate as Venetian glass or translucent porcelain. You can make them with Castoglas, following three simple steps.



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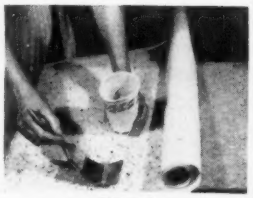

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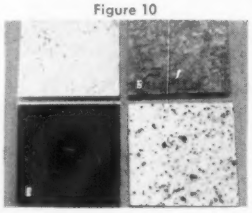

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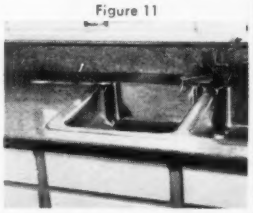

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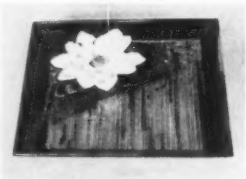
Figure 13



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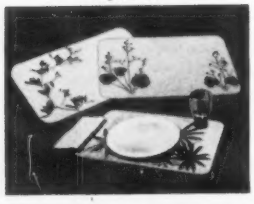

13. The water lily was made of Castoglas and the lovely bowl, constructed of wood and bamboo mat, was waterproofed with Castoglas.

14. Placemats with natural leaves and flowers laminated between two sheets of Castoglas-impregnated glass mat.

ILLUSTRATED DIRECTIONS SHOW YOU HOW

The interesting uses of Castolite products are illustrated and described in our booklet, "How to Use Castolite Liquid Plastics and Fiberglass". Complete directions show you, step-by-step, how to do all the things shown on this page and how to make many other useful and decorative articles for your own home, for gifts or for profit.

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THE CASTOLITE COMPANY, Woodstock, Illinois

WORKBENCH volume 17 number 5

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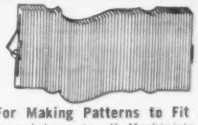

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LETTERS TO THE EDITOR

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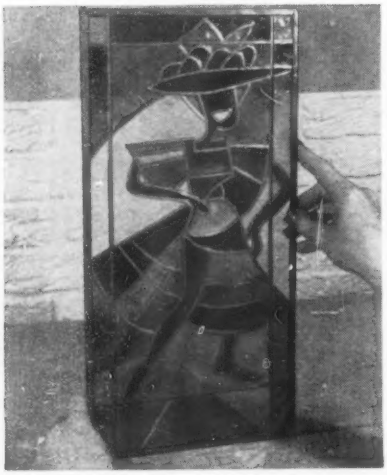


In the article on the Stained-Glass Kits on page 56 of the July-August issue the price is incorrectly stated as $3.95. The correct price is $6.95. We apologize for the error, and for any inconvenience caused the manufacturer or our readers.

Gentlemen:

Enclosed are photos of some toys I have made for my grandchildren. The cradle and dog bed (not shown in this photo) were taken from WORKBENCH and the clown clothes hanger from other patterns. The doll swing and folding play pen are my own creations. Made the first swing about 30 years ago, then two more 3 years ago, one each for my oldest granddaughters. I enjoy WORKBENCH very much.

Robt. P. Blackburn, Independence, Missouri.

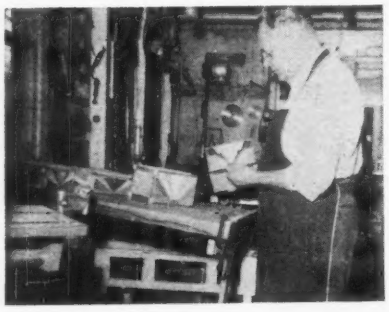
Dear Mr. Blackburn:

Thank you for your kind words about WORKBENCH. *Your grandchildren certainly are lucky to have you to build those toys for them. Perhaps some of our readers would like plans for building the swing; write and let the editors know how you feel.*

Dear Mr. Hedden:

My shop is operated as a small business. I have a Foley Saw Filer for hand saws and circular saws and a Belsaw Sharp-All. Also have a Marsh Picture Frame and Miter Machine for my picture framing. In addition I have a bench saw, jig saw, saber saw, lathe and gobs of hand tools and attachments, many made from ideas published in WORKBENCH and other magazines. My craft work consists mainly of making small musical jewel boxes of ¼-in. plywood and veneered with rare woods, most purchased from Craftsman Wood Service, one of your advertisers. I was 70 in May, on retirement, and Social Security.

Lloyd P. Johnson, The Craft Shop, Lamar, Colo.



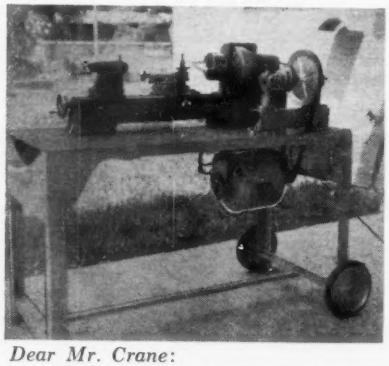
Dear Mr. Johnson:

For a man 70 years young you have more get-up-and-go than many of us younger fellows. Doing work you enjoy, in your own shop, is the dream of many of us for our retirement years. Mr. Johnson sent us a color photo of some of his jewel boxes which, unfortunately, we cannot reproduce. The designs of the inlays show in the black-and-white photo, but the beauty of the various-color woods must be seen in true color to be appreciated. We will publish an article on veneering and inlaying in an early issue for you craftsmen who enjoy this fascinating branch of woodworking.

Dear Sirs:

First became acquainted with your magazine last year, just renewed my subscription. Am a retired army man, just settled here in Florida, ready to do some of the things I have dreamed about for years. Slowly accumulating equipment and tools, using the rear half of our utility room, as we have no basement. Have small bench, shelves and storage cabinets. The utility room opens on to our carport, so have fixed my machines so I can move them out there to work. Enclosed is photo of my metal lathe that I made myself. The table is the base of a mangle, the jackshaft is of 2-in. angle, mounted with heavy-duty screen-door hinges to provide tension. The motor is from a washing machine, and I have it wired so it will reverse. Have never had a metal lathe before and am enjoying learning how to use it. Would like to see something in your magazine on metal turning.

James L. Crane, Sebring, Fla.



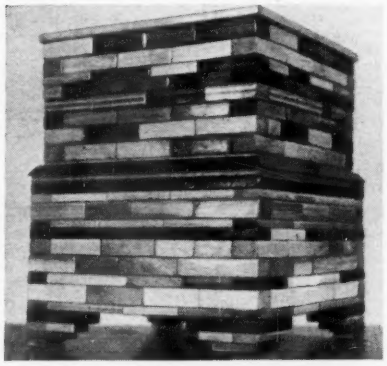
Dear Mr. Crane:

Congratulations on your retirement and much good luck with your shop. We are basically a woodworking magazine, but if we get enough requests we will include metal-turning articles.

Gentlemen:

The enclosed photo shows one of my projects, a plant holder. There are over 340 pieces of wood in it, of ten different types, shaped for a brick effect. The finish is 3 coats of varnish. The top half of the plant holder can be removed, the lower half used as a footstool.

Charles H. Decker, Steubenville, Ohio.



Dear Mr. Decker:

Your project is most unusual. We have never seen a plant holder that had the double duty of holding plants or feet. Any of you other readers have unusual projects you would like to see printed on this page?

Jay W. Hedden

Jay W. Hedden, Editor

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Now you can completely remodel and repair all kinds of upholstered furnishings — CHAIRS OF EVERY DESCRIPTION . . . STOOLS, BENCHES, BEDS, OTTOMANS . . . LOVE SEATS, SOFAS, DAVENPORTS . . . BUILT-IN SEATS . . . PADS, CUSHIONS, SLIP-COVERING

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Here is a small sampling of the contents:

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HANDLING LEATHER CHANNELING, TUFTING, STOOLS, SOFAS. How to handle leather Channeling • Tufting • Stools, Ottomans, and benches • Sofas

THE FINAL COVER. Measuring, plotting and cutting the cover • Sewing the cover Covering the seat • Covering the inside arm • Covering the inside wing • Covering the inside back • Building cushions and pillows • Outside-covers

70 ARTICLES YOU CAN RE-UPHOLSTER. Dimensions, materials needed, and work steps required to fashion 70 beautiful and comfortable articles of furniture—including: Dining Chairs • Modern Side Chairs Modern Occasional Chairs Fireside Chair • Old-Style Occasional Chair • French- and English-Style Side Chairs Bedroom Chairs • Ottomans Stools • Love Seats • Davenports • Sectional Sofas • and many, many more

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Wood box on Model 5500 can be on either side or at back; firebox can even be above. Cherry-inset serving table also is available, as shown.

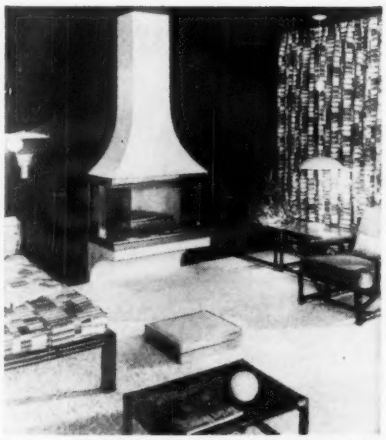
Prefabricated Fireplaces

Photos Courtesy Vega Industries, Inc.

Fireplace Model 4300 for budget-conscious burns wood up to 18 in. long, as well as other fuels. Firebrick is on bottom, steel baffles protect back.

NO MATTER HOW MODERN we build our homes, we still like the appearance and friendly warmth of a wood-burning fireplace. Whether your home is old or new, brick, frame or other type of construction, you now can install a genuine wood-burning fireplace in almost any room in the house, as well as in the basement. And decor is no problem; there are fireplace units that will be compatible with contemporary, early-American, Provincial or any other styling. Shown on this page are five prefab' units that any handy homeowner can install himself. Prefabricated chimneys that are assembled in sections eliminate the need for heavy masonry, and all are approved for fire safety. Some of the fireplace units may be painted any desired color, others are available in a number of colors of baked-on enamel. Any fuel that is satisfactory for fireplace use, as well as wood, can be used in the units. This makes them ideal for heating summer cottages or for supplemental heat in a room that is added-on to a home, where extending heat ducts or piping would be a problem. Or, where such an extension of ducts or pipes would over-tax the present heating plant.

But, best of all, the fireplaces have the charm that only a cheerful, glowing fire can produce. Ideal for popping corn, or for roasting hot dogs on a cold winter night; to bring back a touch of summertime and outdoor living. △ △



This unit, Model 5900, can be installed while house is being built, or afterward. In either case it has appearance of integral part of structure.

Model 5100 unit can be painted any color to accent or harmonize with the decorating scheme of the room in which it is located, as shown.

Ideal for casual modern living is the Model 4700. Burns wood up to 20 in. long, adjustable barbecue grill can be attached instantly.

BUY DIRECT FROM DISTRIBUTOR... SAVE UP TO 75%

Gov't Surplus

DUPONT NYLON CORDS

Below Mfr's. Cost

Light, strong, durable, quick-drying. Will not rot or mildew. Ideal for indoor or outdoor use. Camping, boating, hunting, clothes line and venetian blinds. Perfect for tent ropes, light anchors, deer cord, trot lines, crabbing, etc. Unused.

Outwears Ordinary Rope 10 to 1

NYLON BRAIDED CORD

1/16" dia., 100 lb. test. Per ft. ..... 1½¢
⅛" dia., 375 lb. test. Per ft. ..... 2¢
3/16" dia., 550 lb. test. Per ft. ..... 2½¢
in 50, 100, 200, 300, 400, 500 ft. & over lengths.

NYLON BRAIDED LINE

¼" dia., 1000 lb. test, olive drab, Per ft. ..... 3½¢
in 30, 40, 50 & 75 ft. lengths

ELASTIC SHOCK CORDS
(MOORING SNUBBERS)

Dia.	Price Per Ft.	Dia.	Price Per Ft.
⅛"	$ .05	⅜"	$ .25
3/16"	.08	½"	.40
¼"	.12	⅝"	.60
5/16"	.18	¾"	1.00

Available in any length desired.

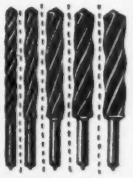
NYLON WEB STRAPS
with Sturdy Steel Buckle

Perfect for passenger safety belts, luggage straps, car towlines, car carrying straps, boat trailer straps, etc. Tie heavy equipment and machinery with greater ease and safety ... at far less cost. Just the thing for the garage or workshop.

1" wide, 3000 lb. test, per foot ..... 12¢
1¾" wide, 6000 lb. test, per foot ..... 18¢
In 6, 8, 12 foot lengths

SUPREME

Carbide Tipped MASONRY DRILLS



The king of stone drills. Special carbide tip makes drilling easy by hand or electric power. Keen, hardened cutting edges easily bore clean holes in brick, marble, cinder block, stone, slate, tile, plaster and the hardest granite. Shanks fit all drills ¼" and up. Fully polished.

3/16" — 75c, ¼" — 85c, 5/16" — 95c, ⅜" — $1.10, ½" — $1.25, ppd.

Complete Set of 5 — $4.50, Ppd.

MONOGRAMMED MONEY BELT

Genuine Leather $3.98

Genuine top-grain cowhide belt will add a handsome note to any attire, while "secret" zippered inner pocket holds currency far from prying eyes. Conservatively fashioned 1¼" wide belt is clinched with a gleaming buckle sporting his 2 or 3 initials. Available in brown top-grain cowhide leather with gold-plated buckle; black leather with a silvery rhodium buckle. Specify waist sizes 28 to 44 and color $3.98

60 Pc. Set CHROME VANADIUM Wire Gauge DRILLS

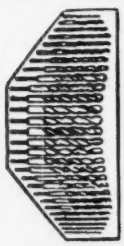
Top quality German import high test Chrome Vanadium Drills designed for speed drilling through toughest steels, woods, plastic, iron and aluminum. Precision ground long-lasting cutting edges. Guaranteed to give a lifetime of years of satisfaction. A full 60 pc. set Nos. 1 thru 60. A $14.95 Value Now Only $5.95
plus 35c pp. and hdlg.

Same set above available with Huot Metal Index container. Only $7.50
plus 35c pp. and hdlg.

Also available — 20-PC. SET NOS. 61-80 WIRE GAUGE DRILLS Only $2.50 ppd.

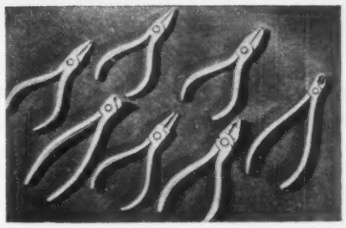
Finest steel! Tops for precision work in woods, plastic, iron, aluminum, etc. Includes plastic kit with marked pocket for each drill.

29-PIECE DRILL SET
CHROME VANADIUM



Especially made for speed drilling. In sturdy plastic tool roll. Finest alloy steel drills hardened and precision ground to the sharpest, longest lasting cutting edge obtainable; will easily and cleanly bite through hardwoods, plastic, aluminum, iron and the toughest steels. Unconditionally guaranteed for thousands of drillings. Full jobber length. Sizes by 64th from 1/16 to ½". Limited quantity of these imported German sets available at this low price, so hurry! NOW $6.95
plus 35c pp. and hdlg.

Also available with turned down shanks to fit all ¼" drills. In individual pocket roll $8.95
plus 35c pp. and hdlg.



7 FINEST IMPORTED 4" PRECISION PLIERS

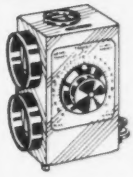
only 75c each

For Jewelers, Optical Workers, Hobbyists, Craftsmen of all kinds. These superb European instruments are of drop forged, heat-treated high quality tool steel, fabricated, ground and polished to most exacting specifications. Smooth working joints. Jaws meet perfectly to hold the most delicate objects. Each plier is 4" long and a gem of precision and strength. 7 types to choose from: Flat Nose, Round Nose, Snipe, Combination, Diagonal, End Cutting Nippers, or 1 Side Flat and 1 Side Round. 75c ea.

Complete Set only $5.00 plus 35c pp. and hdlg.

"HOPPY" SPLIT IMAGE TRANSIT

The Most Revolutionary LEVEL & INCLINE MEASURE Ever Made!



This simple yet amazingly accurate instrument indicates level and measure incline down to a fraction of an inch. Makes bubble type or string levels obsolete. It not only indicates level, but shows exactly how much correction is needed. Just one person, using the split-image transit and target supplied with it, can perform any levelling, incline-measuring job quickly, easily, accurately—measures inclines down to the thinness of a dime at 25 feet. So accurate, it can be used instead of expensive surveying equipment for most grading and construction work.

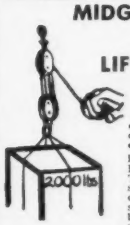
Deluxe Model Split-Image Transit with Exterior Sights.

CARRYING CASE — Fitted Heavy Plastic Leather-Like Carrying Case with Brass Lock $3.95

IDEAL FOR:
Contour Plowing
Carpentry
Brick Laying
Cement Work
Surveying
Guttering
Foundation Work
Patio Building

$9.95 plus 50c pp. and hdlg.

MIDGET BLOCK & TACKLE PORTABLE LIFTS UP TO 1000 LBS.



Weighs only 13 oz.—fits in pocket
one hand operation

AMAZING WORK SAVER FOR
- Hunters
- Farmers
- Yachtsmen
- Handymen
- Truck Drivers
- Motorists

Here's an unusual tool, even for us! It's the tiny Midget Babe Block & Tackle. It weighs only 13 oz., yet is so powerful it lifts up to 1000 lbs. easily! Because of its great strength, small size, complete portability, this block & tackle has many uses. In your car for emergencies, for home, factory, farm . . . for loading heavy articles. For sportsmen: loading deer, boats, etc. For anyone who has to do heavy lifting. Finely engineered throughout, best grade aulminum, steel axles, prelubricated for life. Hoists have two lifting slings, top and bottom, with heavy welded steel rings. Slings can be doubled for extra strength. Complete with 60 ft. nylon cord, 5 to 1 ratio—1000 lb. test. Carrying bag. Instructions $9.95
ppd.

ALSO AVAILABLE—Tiny Babe—Lifts up to 2000 lbs.! With 100 ft. nylon cord, 7-1 ratio, 2000 lb. test—15 oz. weight. Twice as powerful as $9.95 model. Only $12.95
1 yr. Guarantee on both models. ppd.

SHAPE SCRAPE

Only $1.98
With 6 Blades

SCRAPES AWAY OLD FINISHES. Precision engineered tool with six quickly inter-changeable blades to fit almost any surface contour. Gets into corners even sandpaper cannot reach and does away with old-fashioned methods of scraping, making all your "do-it-yourself" work professional. Handle is durable, high impact Bakelite. Long-lasting blades are tool steel and reversible. Perfect for outdoor motor boats, yachts, moldings, picture frames, window-sashes, antiques . . . all furniture. Only $1.98 plus 25c shipping, handling.

RUGGED 6000 LB. TEST

NYLON TOW CABLE

If ever stuck in snow, mud or ditch there's nothing handier to have in your car than a super-strong, All Nylon Tow Cable. Test proven to over 6000 lbs. pull, more than enough for even the biggest trucks and cars. One end has heavy steel snap clamp while other end is looped. Measures 15 ft. long. Also invaluable in home and industry.

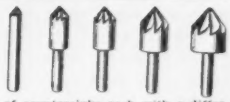
$2.98 plus 25c pp. and hdlg.

¼" Shank ROTARY BURRS

A Sensational new line of rotary burrs made of special analyses steel in an assortment of shapes so wide that they will quickly and easily do most every job imaginable. 10 completely different shapes, cuts and sizes from spindle to turret. Full ¼" shanks. Lengths vary from ½" to 1½". An amazing tool value ..... $1.75 each

Complete set of 10 — Only $15.00

5 Pc. Set of ROTARY COUNTER-SINKS



An indispensable set of countersinks each with a different size head. Includes ¼", 3/8", 5/8", ¾", and 2". All have ¼" shanks and are made of special analysis steel. Each head is ground with 8 flutes at 82 degrees. To reduce chatter and provide faster, smoother, easier countersinking in wood, metal and plastics. Perfect for hand or electric drills.

Set of 5 — Only $3.95

AUTOMATIC SIPHON PUMP

Now—siphon any liquid automatically, safely, WITHOUT putting tube to mouth! Squeeze bulb of this all new style siphon, liquid starts to flow immediately! Transparent valves let you see liquid flowing! Siphons, pumps gasoline, water, any liquid. Even acids, corrosives! For cars, boats, power mowers, campers, plumbers, doctors, chemists, factories! Acid resistant. Over 7 ft. long over-all. Sensational low price $1.98

Also available—heavy duty siphon, ½" dia. tubing, 8 ft. long $2.98

New! At Our LOWEST PRICES!

SUPREME HOLE SAW

with exclusive new Automatic Slug Ejector 7 Hole Saws in 1. Fits any electric drill, drill press, lathe, motor. Automatic slug ejector pops out slug immediately. This saw works three times as fast as other hole saws that sell for twice as much! Cut 1", 1¼", 1½", 1¾", 2", 2¼" and 2½" holes cleanly, accurately. Cuts wood, plastics, metals, formica, wall board, etc. Consists of sturdy alloy tool head, 7 finest quality shatter-proof blades, automatic slug ejector and ¼" drill bit. Imported! only $2.49 plus 25c pp. & hdlg.

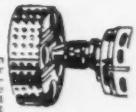
Fast—Powerful Durable

SINGLE HAND WRENCHES

Time is money and these versatile Single Hand Wrenches can outperform, in speed and service, any ordinary wrench. Jaws snap back on tempered steel spring and solidly grasp any object to be tightened or loosened. Wrenches made from Drop Forged Steel with polished steel heads. 10" wrench jaws open to 1½"; 8" wrench to 1¼" and 6" wrench to ⅝". A really necessary set for every homeowner and mechanic. Complete set of 3 wrenches $2.98
plus 35c pp. & hdlg.

FITS ANY ¼" ELECTRIC DRILL

Hardened Steel ROTARY RASP



Rasps, Shapes, Planes and Mixes in a Jiffy! No home, farm, garage or shop can afford not to have this ingenious Rotary Rasp. Snap into the chuck of your ¼" electric drill and it's ready for use. Perfect for fast shaping of furniture, rasping of wood, plastic, fibre, etc.; planing of floors, boards and mixing of oils, paints and other heavy liquids. 2¾" in diam—1 3/16" wide. $1.98 plus 25c pp. and hdlg.

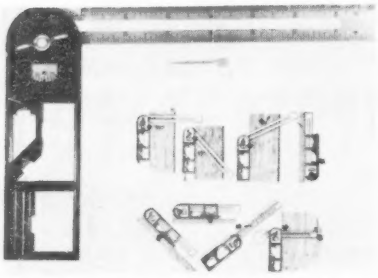
A terrific import from West Germany.

Send Check or Money Order
If C.O.D., $2 Deposit. Money Back Guarantee.

EMPIRE MDSG. CO., DEPT. WO-961 140 Marbledale Rd, Tuckahoe, N.Y.

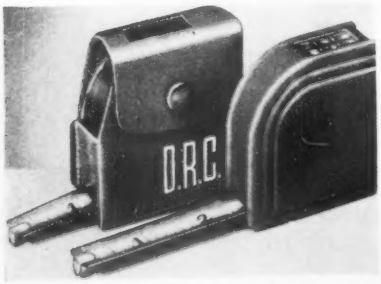
Shopping Tips

8-In-1 Square



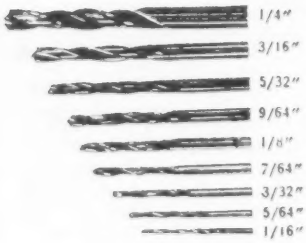
"UNIVERSAL SQUARE" includes 3-way level, can be used as sliding T-bevel, scriber included with it. $2 from Carolyn Creations, P. O. Box 2042, New York 1.

3-In-1 Tool



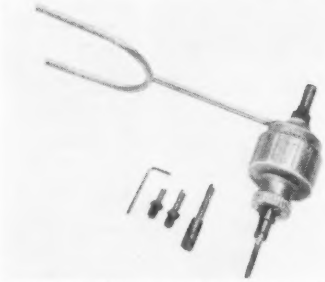
POCKET-SIZE tool is a level, a square and a 6-ft. steel tape. In genuine leather case with 3-letter monogram, $2.25. Not personalized, $1.75. Tower Press, Dept. WB-9, Lynn, Mass.

Twist-Drill Bargain



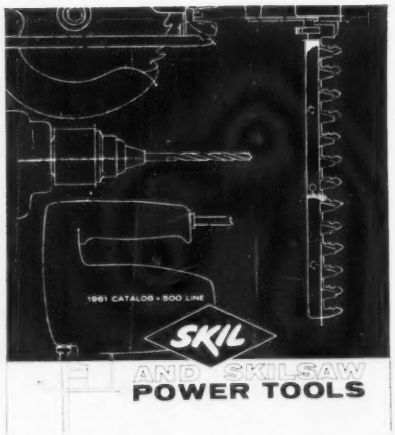
LESS THAN 5 cents each is the cost of these drill bits. You get 5 each of the most-used sizes from 1/16 to ¼-in. Each set contains 41 bits, cost is $2 from Scott-Mitchell House, Inc., 415 S. Broadway, Yonkers, N. Y.

Low-Cost Tapping Head



INSTANT-REVERSING 5-to-1 speed reducer on this tapping head also can be used to drive and remove screws with ¼-in. drill. Unit has ½-in. straight shank to fit drill chuck, 9/32-in. hole in lower spindle accepts Yankee-type shank. Adapter sleeves available at 50 cents each for Nos. 6, 8, 10 and ¼-in. taps. $13.95 from Babcock Mfg. Co., 5632 Shafter Ave., Oakland 18, Calif.

Free Power-Tool Catalog

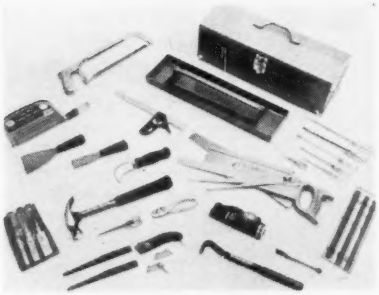


OF 19 TOOLS LISTED, 11 are brand new in this catalog of Skil products. All tools in "500" line are described in this picture-packed booklet. Free from Skil Corp., 5033 Elston Ave., Chicago 30.

Windshield-Mark Remover

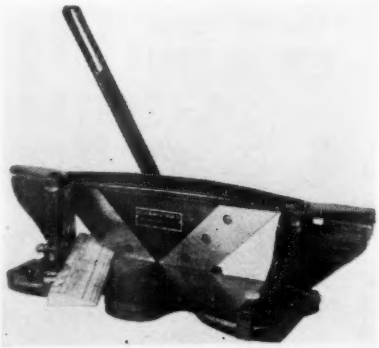
SCRATCHES CAUSED by abrasive grit being caught under the wiper blades can be removed from a windshield. A polish and buffing wheel, in the past sold only to car dealers, now is available to the public in a smaller kit. Price is $5.00 from L & M Activities, Inc., Dept. A, P. O. Box 57, Atlantic Beach, L. I., New York.

Chest Of Tools



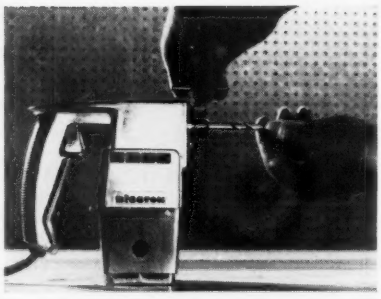
CONTAINED IN THIS chest are 47 popular tools for homeowners, including tubular hammer, screwdriver set, combination square, coping saw, nest of saws, chisel set, block plane, all in 20-in. steel box with tote tray. $29.95 from Great Neck Saw Mfrs., Mineola, L. I., N. Y.

Wood Trimmer-Cutter



ANY ANGLE from 40 through 90 deg. can be cut on this tool. Miters stock up to 5 in. wide, up to 4 in. high. Cuts soft and hard wood, plastic laminates, rubber, etc. Ideal for making picture frames. For price and information write to: Dosch Mfg. Co., Thornton, Delaware County, Pa.

New Electric Drill



UNIQUE IN APPEARANCE, this ¼-in. drill motor is called the "Dirk" and features a vertical motor with the chuck at right angles. Flat base aids in straight drilling, replacing two screws in bottom permits motor to be bolted to wood base. About $30 from Disston Div., H. K. Porter Co., 601 Grant St., Philadelphia, Pa.

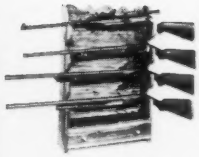
USEFUL! PRACTICAL! FUN TO ASSEMBLE

KNOCKDOWN KITS THAT ARE KNOCKOUTS FROM GILES & KENDALL

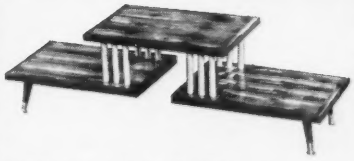
Use the coupon below to get your copy of the Giles & Kendall Company colorful new catalog.

Over 50 items to choose from. All are pre-cut. There's no waste. Hardware included. Easy to follow instructions.

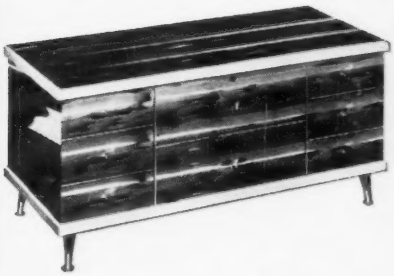
GUN CABINET NO. 707
The knotty pine "Pioneer" gun cabinet holds eight guns. Bottom storage compartments for ammunition and other equipment equipped with two locks. Brass ferrules on legs. Overall size 27" wide, 15½" deep, 83" high. Glass for door not included.



GUN RACK NO. 404
This four gun rack with full width drawer for ammunition and cleaning gear is all cedar. Comes complete, ready to assemble with all screws, brass pulls and safety lock. 32" high, 21½" wide.



COCKTAIL TABLE NO. M-17
Solid cedar. Top is 20" wide, 44" long. Stands 15" high. Complete with all hardware including brass ferrules for legs.



GENUINE CEDAR CHEST NO. 909
The "Astronaut" with simulated drawers and brass pulls has a handsome, modernistic style. Cedar legs have brass ferrules. Size 20" wide, 46½" long, 21" high. Five ply top and front.

LIMED OAK CHEST NO. 999
The "Rocket" limed oak chest has a cleverly designed front of simulated drawers with attractive brass pulls. Modernistic legs with brass ferrules. Size 20" wide, 46½" long, 21" high. Five ply top and front.

Giles & Kendall Co.
Box M
Huntsville, Alabama

Please send me your new catalog of "do-it-yourself" items of Genuine Tennessee Aromatic Red Cedar and other woods. Enclosed is 25¢ (coin or stamps) to cover mailing and handling. I understand this amount will be credited on my first order.

Name _____

Address _____

City _____ State _____

GILES & KENDALL CO.

BOX M

HUNTSVILLE, ALABAMA

Fixes More Things — BETTER!

X-PANDOTITE®

the white mortar-like cement
that expands while it sets . . .

Use X-Pandotite for repairing —

- ★ cracks in walls . . . around bathtubs, showers basins, floors, urinals, toilets . . .
- ★ all types of joints
- ★ loose chair rungs, umbrella handles, kitchen utensils, tools . . .
- ★ electronic assemblies . . .
- ★ tile, terazzo, marble . . . mosaics (setting and grouting)

And—for anchoring bolts, screws, railings, studs, dowels

And—for casting plaques, bric-a-brac . . . many other types of hobby work. May be colored. Non-toxic.

And—for thousands of uses, big or small, indoors and outdoors.

What's more, X-Pandotite does the job better. Here's why —

X-Pandotite differs from all other cements: It does not shrink, crack or dry out, but expands on setting . . . forcing its way into every fibre, pore or crack—in tile, cement, wood, plaster and numerous other materials. What's more, the seal is leak-proof, vibration-proof, shrink-proof . . . unaffected by steam, alkali and other ordinary corrosives. And—remember, X-Pandotite is economical . . . a little goes a long way—and the repairs are permanent.

Ask for it today at your local dealer, or—

SEND THIS COUPON FOR A POSTPAID WORKING SAMPLE TODAY . . . Dept. 13

Yes, send me a full ½ pound sample of X-Pandotite, the easy-to-use, permanent, crack-proof and shrink-proof white mortar-like cement that expands as it sets . . . I am enclosing my check or money order for $1.00.

Name _____

Street or RFD _____

City _____ Zone _____ State _____

X-PANDO CORPORATION
43-15 - 36th St., Long Island City 1, N. Y.

Do it yourself and pay for a Speedy Sprayer from the savings on the first paint job! Sprays fences, screens, shutters, furniture, rough walls, floors, big jobs in minutes instead of hours. Finish is smooth, flawless. A real professional tool, proved by 40 year's use. Get a Speedy Sprayer!

Speedy Sprayer

W. R. BROWN CORP.
Our 40th Year of Portable Paint Sprayers
2653 N. Normandy Ave., Chicago 35, Ill.

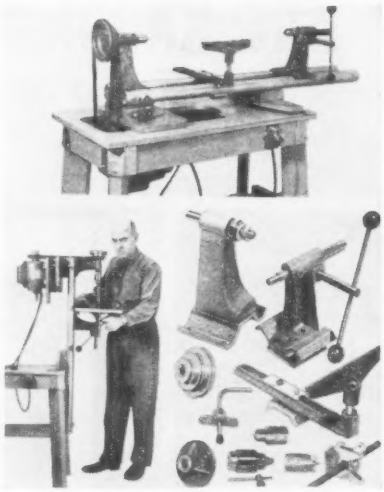
FREE! Write for "How to Spray" and catalog.

Looking for a PUBLISHER?

Your book can be published, promoted, distributed by successful, reliable company noted for prompt, personal service. All subjects. Free Editorial Report. Inquiries also invited from businesses, organizations, churches, etc. Send for Free Booklet. Vantage Press, Dept. HB, 120 W. 31, New York 1.

SHOPPING TIPS

Build-It-Yourself Combination Tool



FOUR-PURPOSE tool is easily built, using machined steel and aluminum parts, with a wood frame and steel-pipe bed that craftsman builds himself. Only hand tools needed for building and assembling. Folder showing entire line of build-it-yourself power-tool kits available from Gilliom Power Tools Mfg. Co., 1109 N. Second St., St. Charles, Mo.

Compact Motor-Compressor

EXTREMELY QUIET in operation, this motor-compressor unit weighs just 11 lb. including spray gun. Compressor diaphragm is neoprene with a nylon core, guaranteed for 1,000 hr. or 3 years. Complete with 6-ft. electric cord, 8-ft. air hose. $34.95 from Thomas Industries, Sprayit Div., 207 E. Broadway, Louisville, Ky.

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EVERY HOMEOWNER needs this cleaner that quickly removes anything from paint and putty to tar and grease without water. Contains no abrasives or strong alkalis, but has lanolin so even Mom can use it. In 14-oz. can, 79 cents. In 3½-oz. tube, 59 cents. From Quickee Products, Inc., Yonkers, New York.

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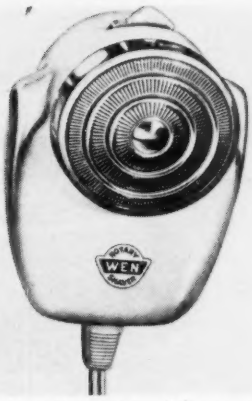
"DECORATING AND SHADING WITH CANVAS" a 24-page, color booklet, beautifully illustrates more than sixty varied shapes and styles of canvas sunshades for windows and doorways, poolside and patio, walkways and carports, and interesting accessory uses. Also includes color recipes for smart exterior decoration. 25 cents, National Cotton Council of America, P. O. Box 9905, Memphis 12, Tenn.

Rotary Shaver



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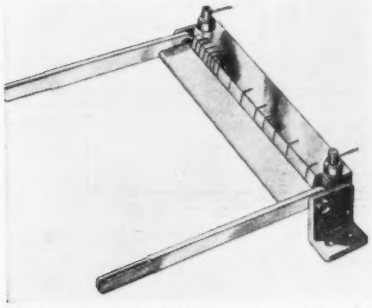

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Building Kitchen Cabinets

1. Indicated in this photo of the Hotpoint model kitchen is the cabinet described in this article, the first in a series showing a complete kitchen.

2. Base cabinet is complete, ready for finish, and for a top. Plain fir plywood is used on our model, a variety of hardwood-faced plywoods are available to any builder.

PART I
RALPH TREVES
INTRODUCTION:

WOULD YOU LIKE a kitchen as beautiful, modern and efficient as the one shown in Fig. 1?

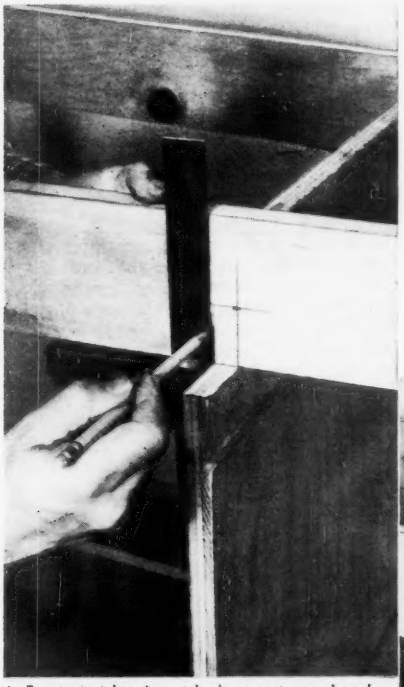
The photo was taken in the Hotpoint Center in New York City, and is just one of a number of Model Kitchens on display. Your own kitchen may not be as large, nor of the same shape, but the cabinets, counters and appliances can be installed in your kitchen with just a little planning.

Modern kitchen cabinets vary mostly in details and features such as door styling, hardware and finish. In the past the biggest problem in making cabinets at home was the finishing. This no longer is true, as hardwood-faced plywood in a great variety of woods is readily available.

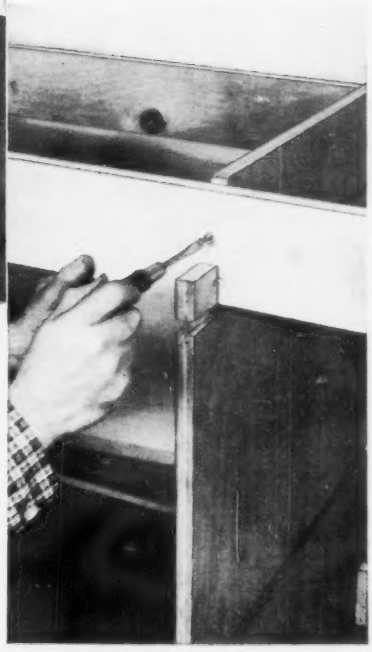
3. After vertical members are cut out and notched, they are joined with lengths of solid stock. Screws and glue are used.

The plywood can be stained a color, or a wood tone, to produce a custom effect that will match appliances, an existing floor or woodwork. Another solution to the finishing problem is the use of plastic-laminate sheeting, (Formica, Micarta, Textolite, etc.), in any of dozens of colors and in natural wood grains. It can be applied to doors, drawer fronts and all exposed framing. Modern contact adhesives assure easy, positive attachment of the plastic.

What about cost? The most expensive part of any kitchen modernization is the cabinetwork; by doing it youself you save tremendously. You might be able to do some, even all, of the plumbing and wiring for still greater savings. Another point is that by doing the entire project yourself you can budget the cost over the time it takes to build all units by buying only the materials required for one or two cabinets.



4. Front stretcher is notched at center and ends so its upper surface is flush with lower edge of dado for bottom shelf to support it.



5. Front stretcher, as other stretchers, is attached solidly with glue and wood screws. Cabinet frame here has been turned upside-down for easier working.

Then, perhaps a month or two later, you proceed to the next stage. In our research on this series of articles we contacted most major manufacturers of appliances, such as counter-top ranges, ovens, dishwashers and the like. All of them, with the exception of some mail-order houses, recommend (some insist) that a homeowner get the specifications for size of openings, dimensions and so on, from a local dealer, then after the builder has set up his cabinets and counters with the correct cut-outs he should contact a licensed plumber, and/or electrician to make the actual installation. While this is true in many cities and areas, we visited a number of dealers and found that they were willing to sell appliances at contractor's price to individual builders, considering them their own contractor. Where there are local building codes covering the installation of major appliances, the installation must be made according to code. Some of the dealers we contacted said they usually would make one call at the request of the homeowner to check a problem. More than one call required payment of a service charge. We suggest you check in your own area as to the policy of the dealers of appliances. As a further suggestion, we recommend that unless you are thoroughly familiar with wiring and plumbing, you do have a plumber or electrician make the actual installation. Problems of water hammer in plumbing can be annoying and destructive, shorts and defective circuits in a 220-volt wiring system can be lethal.

As to the cabinets and counters themselves; anyone with a familiarity with tools can build them. In our series of articles we show in extensive detail with photos each step in construction. All cabinets and counters in this series of articles actually have been built. By this process we

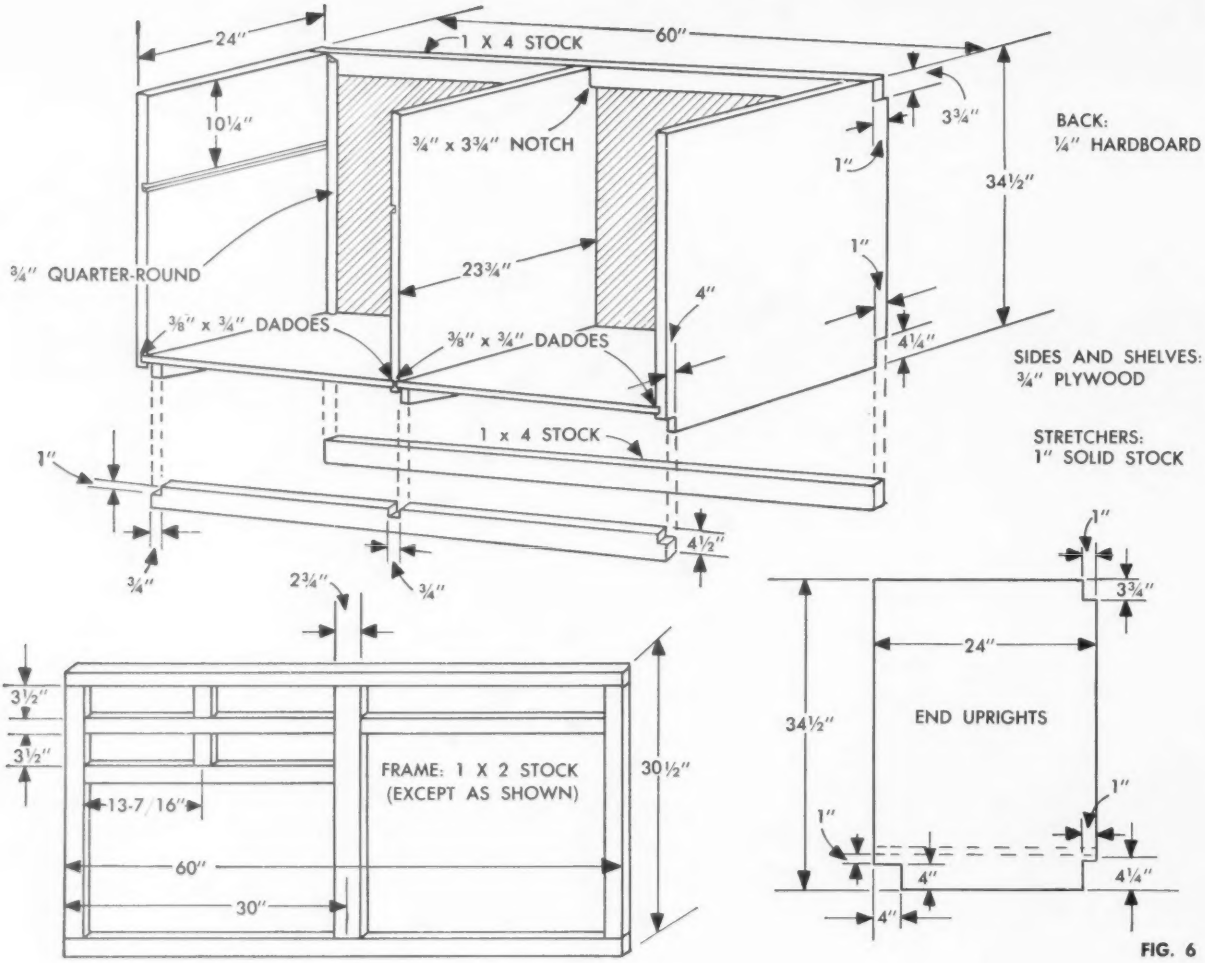
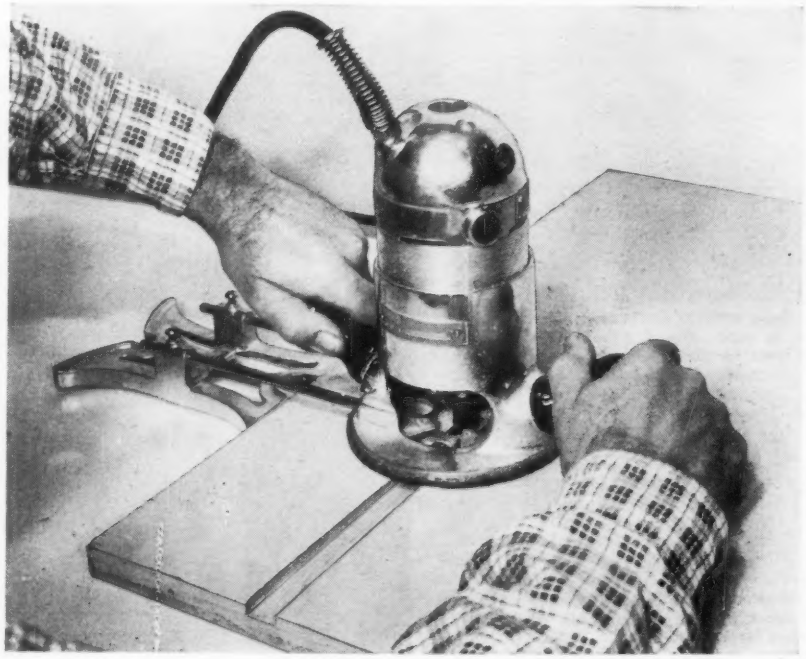


FIG. 6

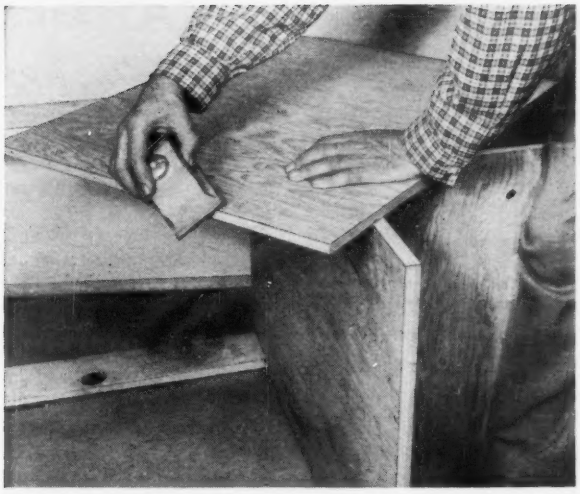
have eliminated any theory; all cabinet construction is practical carpentry. Some of the methods of jointery may not suit an experienced cabinetmaker, and he may choose a different type. Our main concern was to keep the jointery simple.

A table saw or radial-arm saw is almost a must for the kitchen project. A portable jig saw or circular saw will be helpful in cutting large plywood panels to sizes more easily handled in a home shop. A ¼-in. drill, 2-ft. square and ordinary hand tools also will be required.

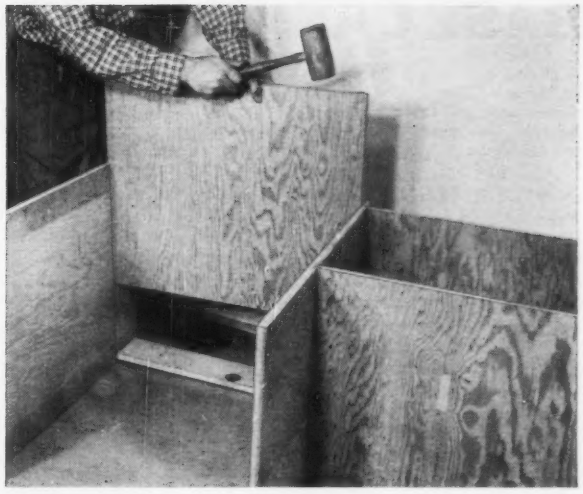
Planning is an important part of your kitchen modernization. You will want to know where every cabinet and appliance will go, so that cabinets can be made beforehand with the assurance they will fit, and that no space factor has been overlooked. There are many sources for help in planning. Every appliance dealer has illustrated booklets, prepared by manufacturers, which can be obtained free. Make sure you get the



7. Dadoes for shelves can be cut with dado head on table or radial-arm saw, or as here, with router fitted with guide. Dadoes are snug fit for shelves.



8. Shelves will slip into dadoes more easily if edges of plywood are sanded lightly to remove sharp corners. Also sand away any rough spots at this time, rather than doing it after assembly.

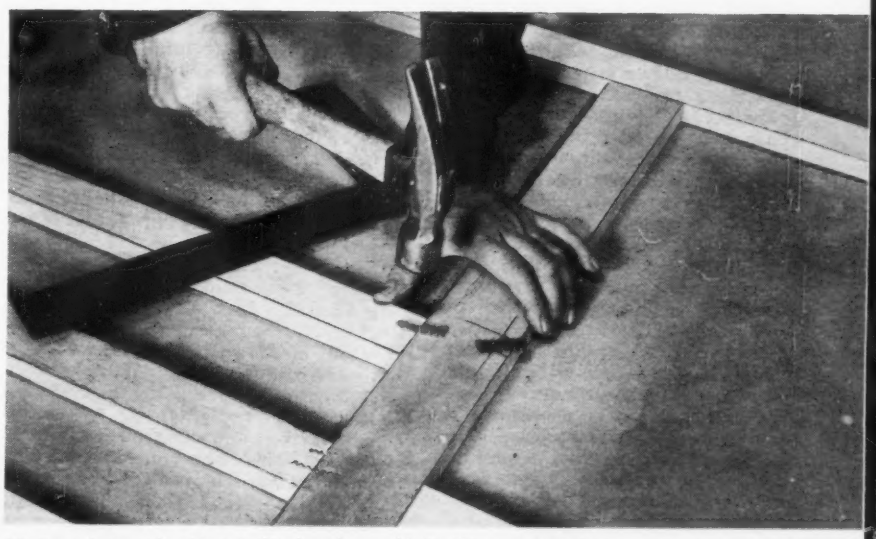


9. Use a wooden or rubber mallet to drive in the shelves, so as to avoid splintering veneers of the plywood. Shelves are cut exact size so they are flush front and back with sides.

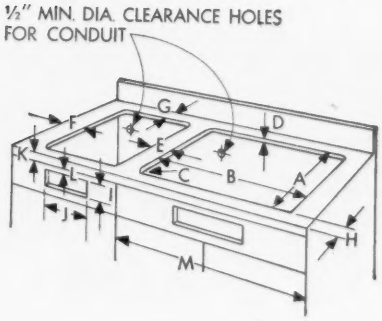
manufacturer's specifications for any appliance you will install. These always include sketches with all necessary dimensions, as for a counter-top range or built-in oven. An example is shown below.

Standard dimensions for all base cabinets are 24½ in. deep (from front to back) and 34½ in. high. Lengths of the cabinets will vary according to their purpose and the space they will occupy. The depth of 24½ in. works out fine for using standard panels of ¾-in. plywood that are 48 in. wide. When ripped down the center these panels become two strips slightly less than 24 in. wide, (allowing for the saw kerf). The 24-in. width, plus the thickness of 1-in. lumber, (approx. ¾-in. finished), used for the facing frame makes the required 24½-in. depth. The 24-in. depth of the plywood alone is sufficient to make cutouts for counter-top ranges, and will be flush with the front edges of built-in ovens, dishwashers, etc.

The height of base cabinets works out also. The thickness of a plastic-laminated counter-top added to the 34½-in. base is almost 36 in., which is the convenient working height for the average person. All standard under-the-counter appliances like a dishwasher, are 34½-in. high. Base cabinets are built individually to required lengths for each space or purpose, then fitted together during installation. Thus each cabinet may be planned to include particular features you wish, such as tray racks, waste pail, silverware drawers and compartments for bulky items. Plan to include some of the very ingenious and practical fittings for pots and their covers, for towels, etc.

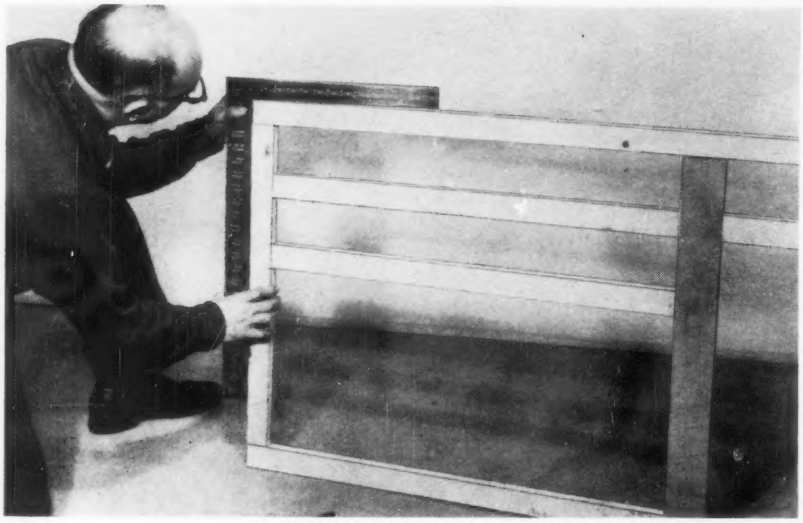


10. Front facing of cabinet is fitted and assembled with corrugated fasteners on the back side where they will not show when cabinet is assembled. Keep all joints and corners square.



11. Outside corner joints of the facing are reinforced by using long finishing nails. It is best to pre-drill an undersize hole to prevent nails from splitting wood.

BASE CABINET FOR COUNTER-TOP RANGE



12. At each step in the assembly check the corners with a 2-ft. square to make sure of accurate final assembly. Constant checks avoid problems later.

IN THE KITCHEN ILLUSTRATED, Fig. 1, there is a 5-ft. stretch between the built-in oven and the corner lazy-susan cabinet. A single cabinet in this space is suitable, because it avoids the double-framing of two separate cabinets, and the over-all size is convenient to handle for construction and installation.

This cabinet has an inside divider, because one side will receive the counter-top range. Most ranges of this type are 21 in. front-to-back, so they fit easily in the 24½-in. width of the counter top. The step-by-step instructions that follow apply to other base cabinets, the main variation being in the length that must conform with an available space. On one side of the divider in the cabinet described there is a wide drawer at the top and a large double-door compartment at the bottom. The other side has two small drawers at the top and a compartment at the bottom, Figs. 2 and 17. There appears to be four drawers on the left side, but the top two are false because of the depth required for the counter-top range.

In the matter of material: If the cabinets are to be painted, regular fir plywood can be used. If you plan to stain and lacquer the plywood for a natural-wood appearance, then select a hardwood-faced plywood such as birch, maple, mahogany, walnut or a similar wood. Lay out the wood so the best side will be exposed. If the ends of the cabinet are not exposed, use fir plywood, "good one side," as it is most economical. Regular fir plywood is fine for all partitions, shelves and other surfaces on the inside of the cabinet.

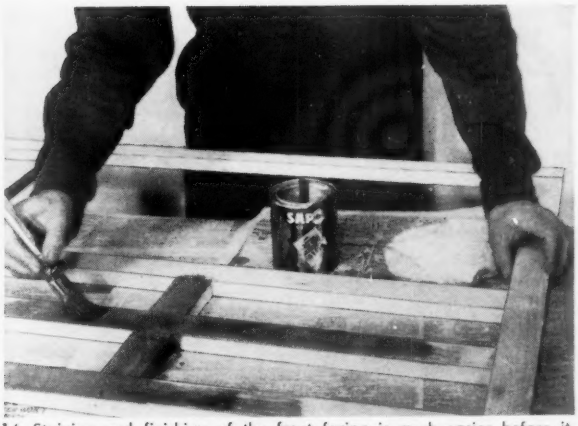
13. After front facing is assembled it is sanded smooth, butt joints checked for tightness, any imperfections are packed with wood putty.

When you buy plywood in the 4 x 8-ft. size, have the lumber dealer rip the panels to 2 x 8 ft. and you will save a good deal of trouble in handling and cutting the material. Make sure the lumberyard cuts the plywood straight and true, and uses a sharp blade that will not chip or splinter the hardwood veneer. Also, use a 5-ply material, rather than solid-core plywood, as the 5-ply material is more stable and will not warp. For solid lumber, get top-grade, kiln-dried and knot-free stock. If you are using hardwood-faced plywood, clear white pine is fine, as it can be stained to match.

Start construction by cutting and shaping the uprights, Fig. 6. For this cabinet you will need three uprights 24 x 34½ in. Here you may run into your first problem if your saw table is not big enough to permit making the 34½-in. cut. There are several other ways to do this. If you have a portable circular saw or jig saw, clamp a guide strip to the plywood to permit making a straight cut. Or clamp a guide strip on the plywood at a point that will permit it to slide along the edge of the saw table with the saw blade on the mark. You can even do the cutting with a handsaw if you are careful to follow the line and not splinter the hardwood veneer. This particular cut need not be as precise as others in the project, as the top edge of the uprights will be covered by the counter top, but good workmanship requires that it be at least straight and uniform on all the uprights to assure accurate assembly.

The uprights now are dadoed ⅜ x ¾ in. for the ¾-in. shelves, Fig. 7. Because the shelves will vary for each side of the cabinet, mark the uprights No. 1, No. 2 and No. 3 to show their relative position, and also mark them "top" and "bottom" so there will be no mistakes. Upright No. 1 is on the left side and receives two dadoes. No. 3 is on the right side and has only one dado. The center upright, No. 2, is dadoed on both surfaces to conform. Lay out the uprights as in Fig. 6. The center upright, No. 2, is now ripped down ¼ in. narrower than the others, to allow for the thickness of the panel that is nailed all across the back.

The next step is to notch the corners for the crosspieces that join the three uprights. Make a 4 x 4-in. notch at the front, lower corner of each upright for the toe space. Next, make a notch 1 x 3¾ in. at the upper rear corner of uprights No. 1 and No. 3. In No. 2 upright, the notch is ¾ x 3¾ in., the narrower notch resulting from the fact that the center member is ¼ in. narrower than the others. In the lower, rear corner of the two outside uprights cut notches 1 x 4¼ in. The center member is notched ¾ x 4¼ in. Lengths of 1 x 4 are used as stretchers across the back of the uprights. They are the full lengths of the cabinet; 5 ft. if you are duplicating the cabinet described. Support the three uprights on their front edges temporarily by driving 2-in. finishing nails through the stretchers into the plywood. Then drill countersunk pilot holes and drive 2-in. No. 8 screws, Fig. 3. When attaching the center upright make sure there is at least 2 in. between the upright and the location of the opening for the range. Most ranges are 31 in. long, but this can vary. Now turn the unit over and fit the front stretcher, Figs. 4 and 5. This strip is ripped to a width of 4½-in. then notched, as indicated to fit snugly against the underside of the bottom shelf. Note that the lower



14. Staining and finishing of the front facing is much easier before it is installed. Apply oil stain as per manufacturer's instruction, wipe off, then apply finish of clear lacquer or shellac.

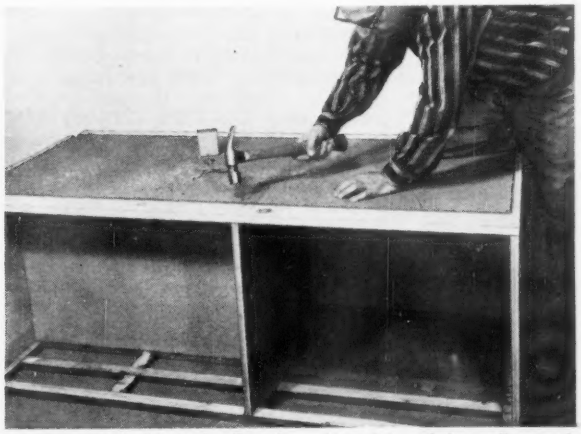
15. Front facing is fitted to cabinet assembly, attached with long finishing nails that are countersunk deeply, holes filled with wood putty. Alternate method is glue blocks on inside.

edges of the bottom stretchers do not reach the bottom edges of the uprights. This is to assure that the cabinet will sit on the uprights, rather than the stretchers, should a floor be uneven. The ½-in. opening between the floor and the front stretcher is sealed with a cove molding when the cabinet is installed. The basic frame now is completed and should stand square and solid on a level floor.

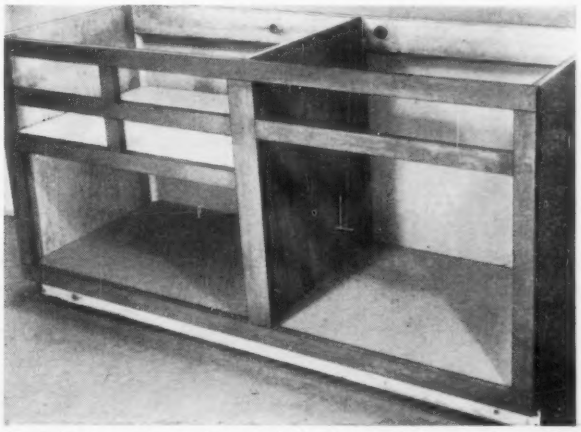
The facing frame for the cabinet is next. Place the cabinet on its back for convenient measuring. First, cut two lengths of 1 x 2 to fit across the full length of the cabinet, place these two 5-ft. strips on the upper and lower edges of the frame, then measure between them to determine accurately the lengths of the two outside uprights that are cut from 1 x 2 stock. Do the same for the center member cut from a length of stock ripped to 2¾ in. wide. Lay the cut pieces on a flat floor, square and true up the frame and fasten with corrugated fasteners from the back as in Fig. 10. Now measure and cut the drawer supports, then attach them in the same manner, Fig. 10. The outside corners of the facing frame are joined with long finishing nails, Fig. 11. Use glue on all joints. Center two short lengths of 1 x 2 in the drawer openings, as indicated in Fig. 6, and attach with corrugated fasteners. Keep a constant check on the squareness of the frame, Fig. 12. If everything is kept true and square, there will be very little trouble with the final assembly. Make a final check of the frame when it is sanded, Fig. 13. If there are any uneven joints, fill them with wood putty, allow to set, then sand smooth. If you are going to stain your cabinet, it will be easier to stain and finish the facing frame before it is installed, Fig. 14. When the stain and shellac have dried, the facing frame is fitted on the cabinet, Fig. 15 and nailed in place with finishing nails. A nail set is used to countersink them, and the holes then are filled with wood putty colored to match the stain. A light sanding will finish the job. If you wish to avoid face-nailing, triangular blocks can be glued and nailed to the uprights, then glue and short wood screws driven through them into the back side of the facing frame.

The last step is to nail ¼-in. hardboard or plywood over the back of the cabinet, Fig. 16. It is nailed over the top and bottom stretchers and on the center upright, but requires that ¾-in. quarter-round be glued and nailed at the back edge of the inside surface of each of the end uprights to provide a nailing surface. The basic cabinet frame, Fig. 17, is ready for doors, drawers and top.

In the next issue will be described the making of doors and drawers. With these two articles you will be able to make all the base cabinets you require. You may want to include special features in your cabinets that will be elaborated in later articles in this series. A lazy-susan corner cabinet will be described in one article, the special details involved in installing a built-in oven will be described in another. Finishing also will be covered. △ △

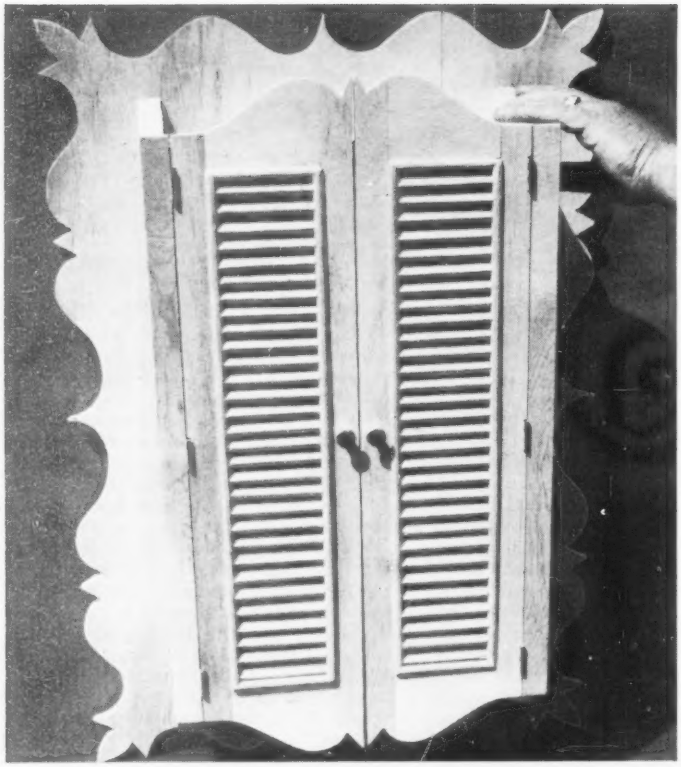


16. Back panel of ¼-in. hardboard or plywood is nailed on all around. In situation where cabinet is to be fitted tightly to a finished wall, builder may prefer to omit this back member.



17. Cabinet now is complete, ready for doors and drawers. Note deep space at left, for the counter-top range. There is room for two shallow drawers in bottom spaces, upper spaces will be "false" drawers.

Louver-Door Spice Cabinet

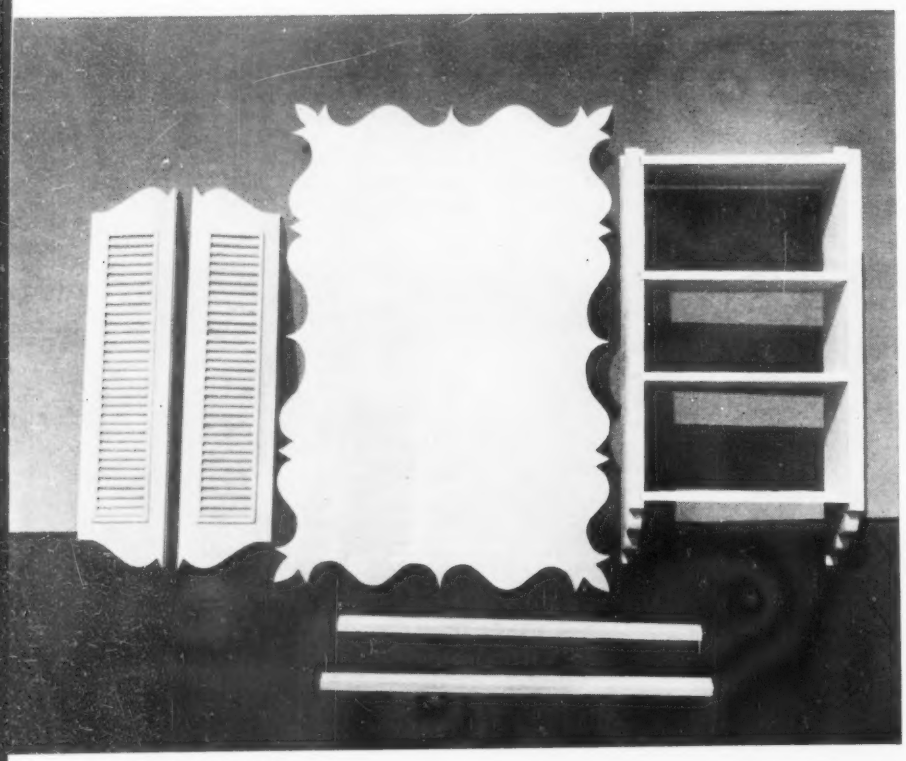


JAMES A. LOCKHART

All finished and ready to hang, this spice cabinet has real "spice" in its design.

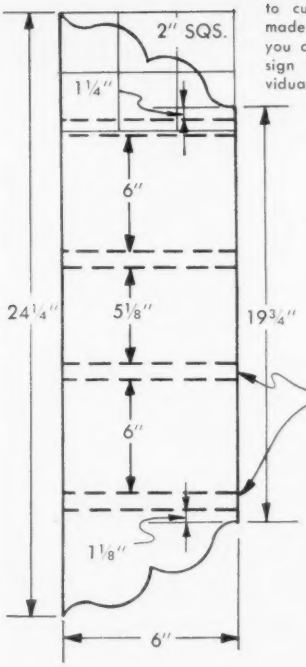
MOST UNUSUAL is the design of this spice cabinet; it will look well with either contemporary decor or early-American. First step is to glue up white-pine lumber to a size that will accept the pattern of the back. A pattern is made from the squared drawing and traced on this member and it is cut out. Cabinet sides are cut next, and dadoed to accept the four shelves. The cabinet assembly is fastened to the back, then the two trim strips are fastened to the front.

The door frames are cut as indicated, then assembled with glue and finish nails. Louvers are cut from ¼-in. lattice stock, each one being 2-15/16 in. long. Fit the louvers in the inside frames by starting at the top, gluing the first in place at an angle of about 55 deg. Fit ⅛-in. spacers between the louvers, (small pieces of ⅛-in. hardboard will do), as you glue them in place. When all louvers are in and the glue has dried, drive in ½-in. brad through the inside frame into each end of each louver. The spacers are removed after the bradding is done. Bright-brass hinges are mortised into the edges of the door and trim strips, as indicated and the doors are fitted. It may be necessary at this time to trim the edges of the doors to provide a proper fit. The completed cabinet can be stained and finished to suit your individual taste. △ △



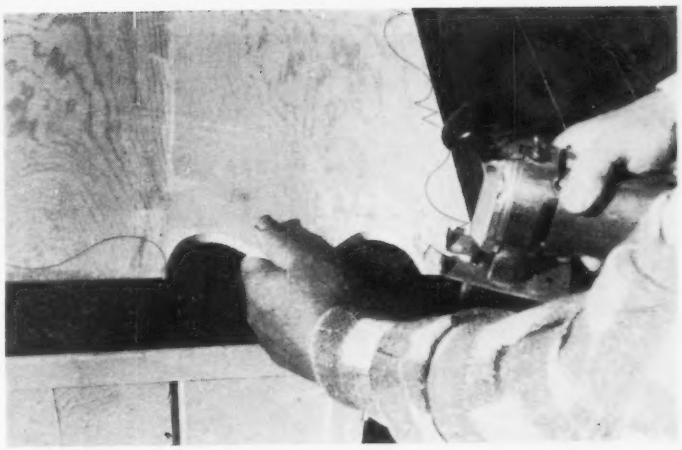
All components for the cabinet: Shelves and sides are assembled, back is cut out, doors are complete, strips ready to attach.

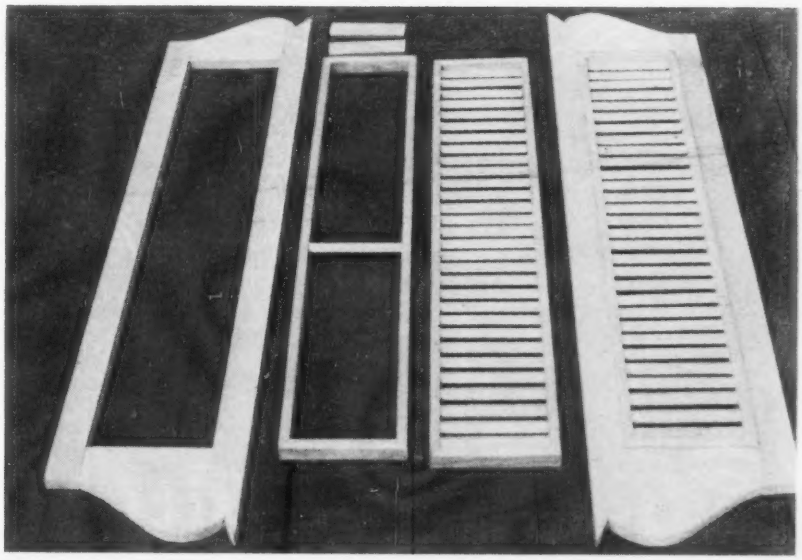
When pattern is drawn on back, hand or power jig saw is used to cut it out. Pattern can be made from squared drawing, or you can originate your own design to give your cabinet individuality.



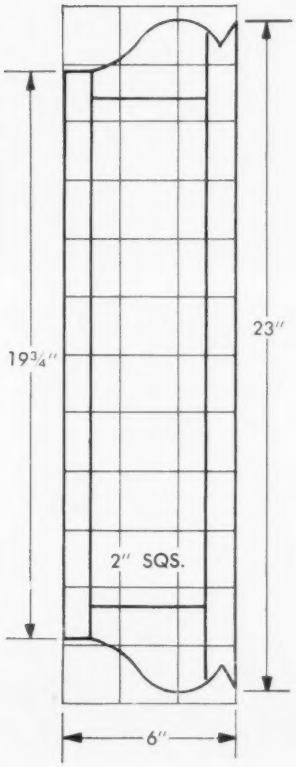
SHELVES ARE 6" x 12"

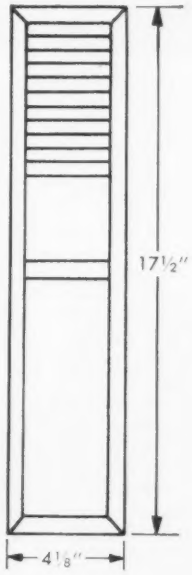
⅜" x ½" DADOES

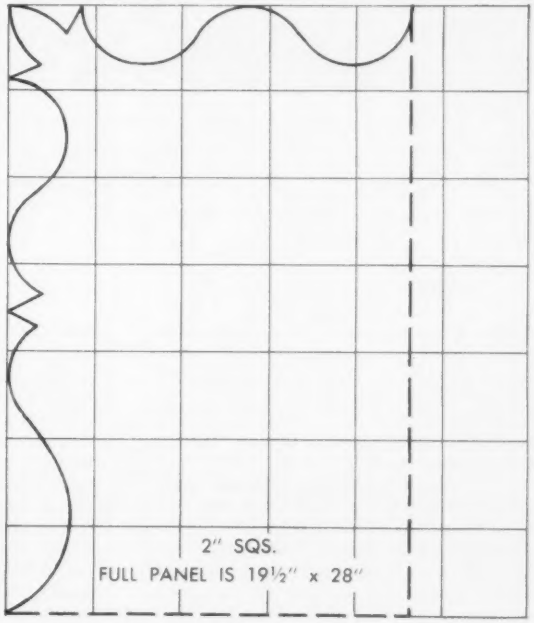




Shown are various steps in assembling louvered doors. At left is frame, next is inner frame with two louvers above. Complete louver assembly is next, finally, at right, is finished door.







Child's Vanity and Chair

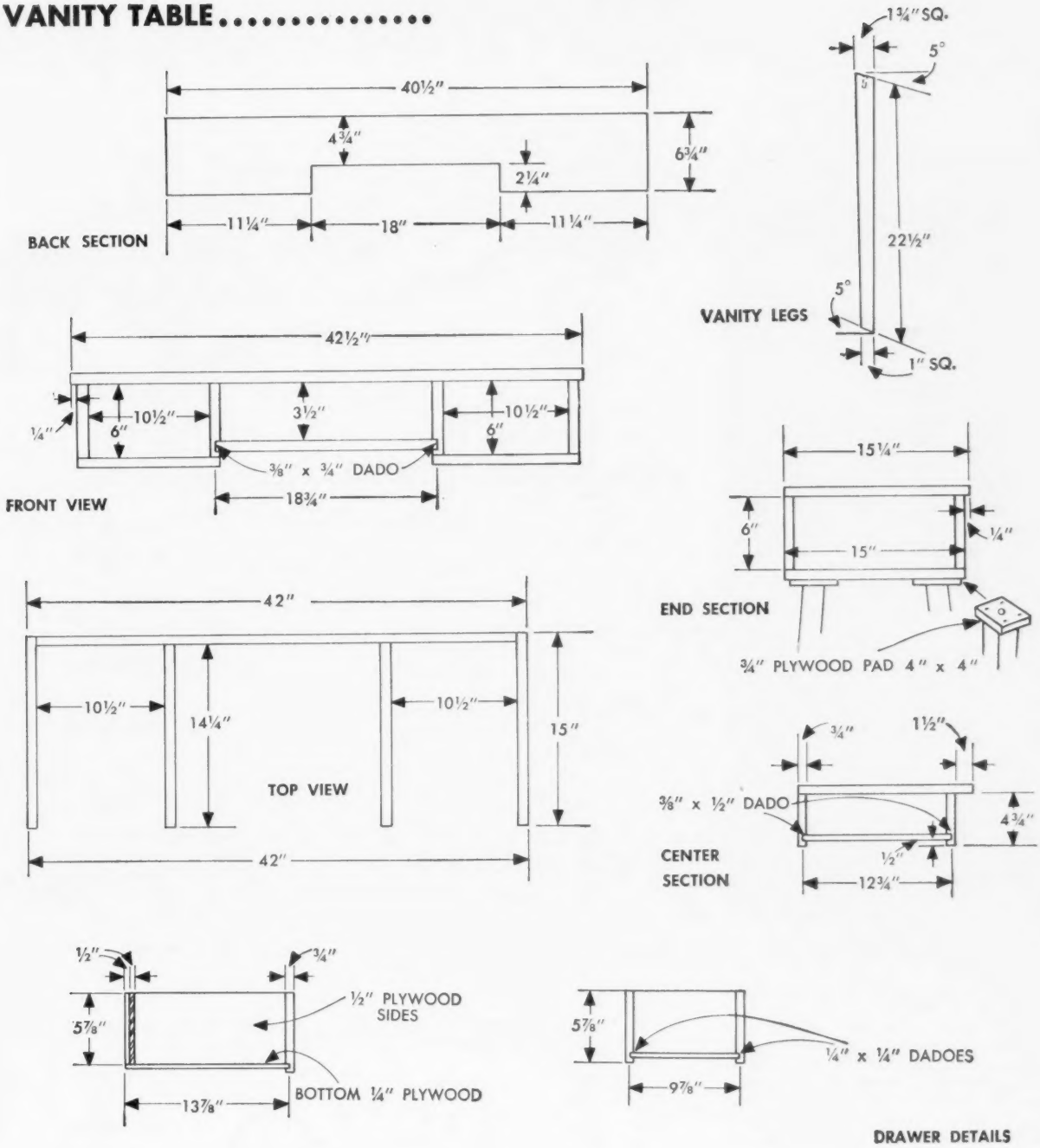
C. L. WIDDICOMBE

THERE IS NO ARTICLE OF FURNITURE that will please a growing young lady more than a vanity table. The table described in this article is complete with its own chair, and will be the proudest possession of any future beauty queen.

Construction is not difficult; although dadoes are shown in the drawings for some joints, they can be changed to simple butt joints to simplify assembly even more. Simply shorten the dimensions of any part by the lengths of the extensions required to fit into the dadoes. Note that the legs are attached to pads 4 x 4 in. square, cut from ¾-in. plywood. A dowel is fitted in the center of each leg end and through the pad, and glue and a single wood screw are used to complete the assembly. These legs must be attached to the bottoms of the end compartments of the vanity table before the bottoms are attached. Round or square legs of various lengths also can be purchased, should you wish to modify the design somewhat, and save time.

Ready for primping, play or study, this vanity will delight the heart of any young teen-ager.

VANITY TABLE.....

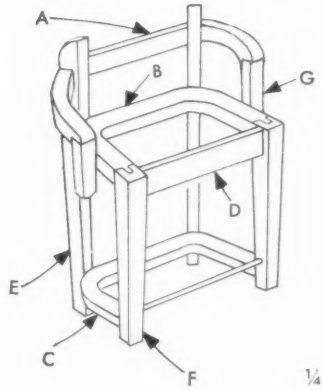


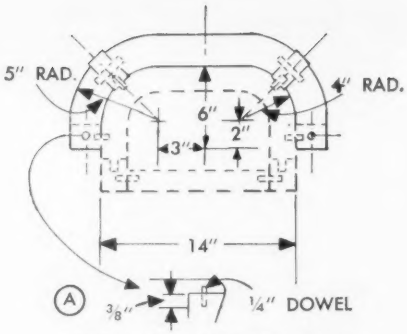
VANITY TABLE

Cut the back and the four partitions from ¾-in. plywood and assemble. Note that the back fits inside the ends, and that the two center partitions are ¾-in. shorter than the ends. If dadoes are used, cut them on the inside surfaces of the partitions before assembly. Next, fit in the bottom of the center compartment and the bottoms of the two end compartments. (The legs should be attached to the bottoms before the assembly.) Now temporarily fit the top on the table—treat the tops as one piece—and mark the location of the hinges and the required cuts. Remove and cut in three pieces, then fasten to the ends and partitions with glue and finishing nails. Attach the hinges and double-check to make sure the center lid swings freely between the fixed tops on the end compartments. Make the two drawers, as detailed, then add pulls of desired design to the two drawers and attach two false pulls to the center section. For a final touch, fit a mirror inside the lid.

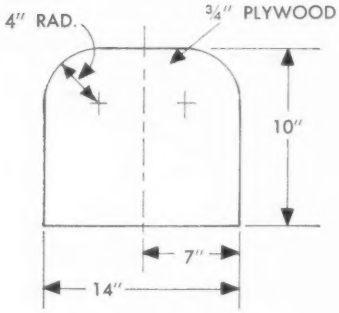
CHAIR .....

Extensive use of plywood makes assembly of the vanity chair quite simple. Solid stock is used only for legs, vertical parts of arms.

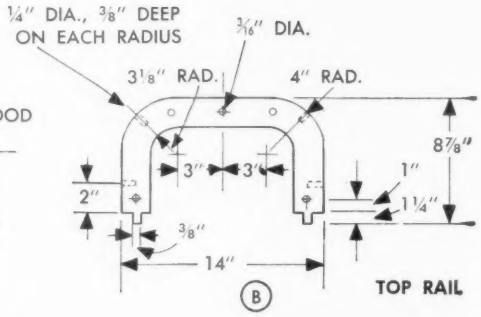




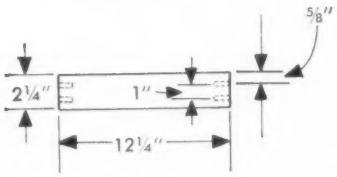
3-PART BACK AND ARM REST



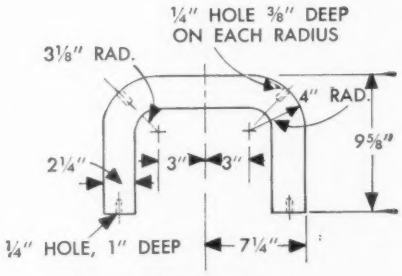
CHAIR SEAT



TOP RAIL



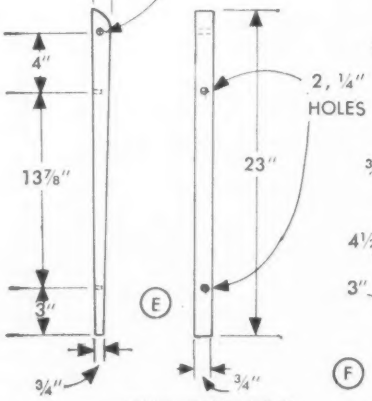
FRONT RAIL D



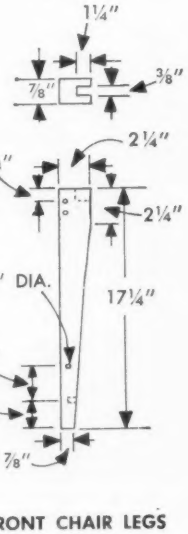
BOTTOM RAIL

VANITY CHAIR

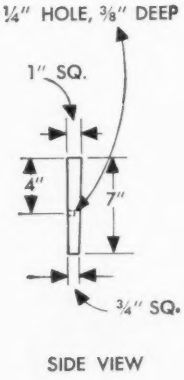
The chair offers more of a challenge than the table, but will present no problems if you are accurate in the layout. The two front legs are 7/8-in. hardwood. One edge of each leg is straight, the upper end being 2 1/4 in. wide down a length of 2 1/4 in. At this point the leg is cut to taper to 7/8 in. at the lower end. A sub-assembly of the two legs, front rail and rung, which is a length of 3/4-in. dowel, can be made up now. While the glue is setting cut the top and bottom rails. Use two blanks cut from 3/4-in. plywood clamped together and cut both rails at the same time. Note that the bottom rail is longer than the upper. This allows for the taper on the front legs. Bore the two 1/4-in. holes in the ends of the bottom rail before cutting them at an angle to fit the front legs. Cut and shape the rear legs, drill as required, then assemble the front legs, upper and lower rail and the rear legs. Attach the side arms and three-part back rest. The seat is last, being just a piece of 3/4-in. plywood 10 x 14 with a 4-in. radius on two corners. The seat can be upholstered, as was the original, with cotton batting or foam rubber, covered with sheet plastic. Pink was the color used on both table and chair, with accents of flat-black enamel. △ △



REAR CHAIR LEGS



FRONT CHAIR LEGS



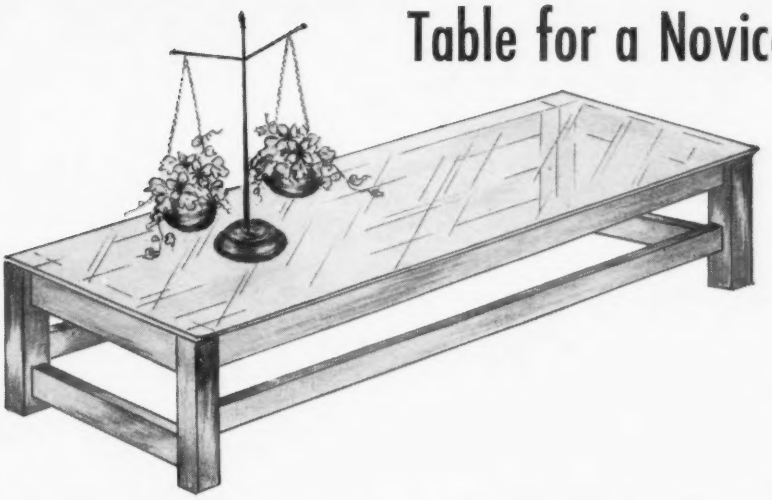
SIDE VIEW

G

CHAIR ARM

Table for a Novice to Build

Hi Sibley

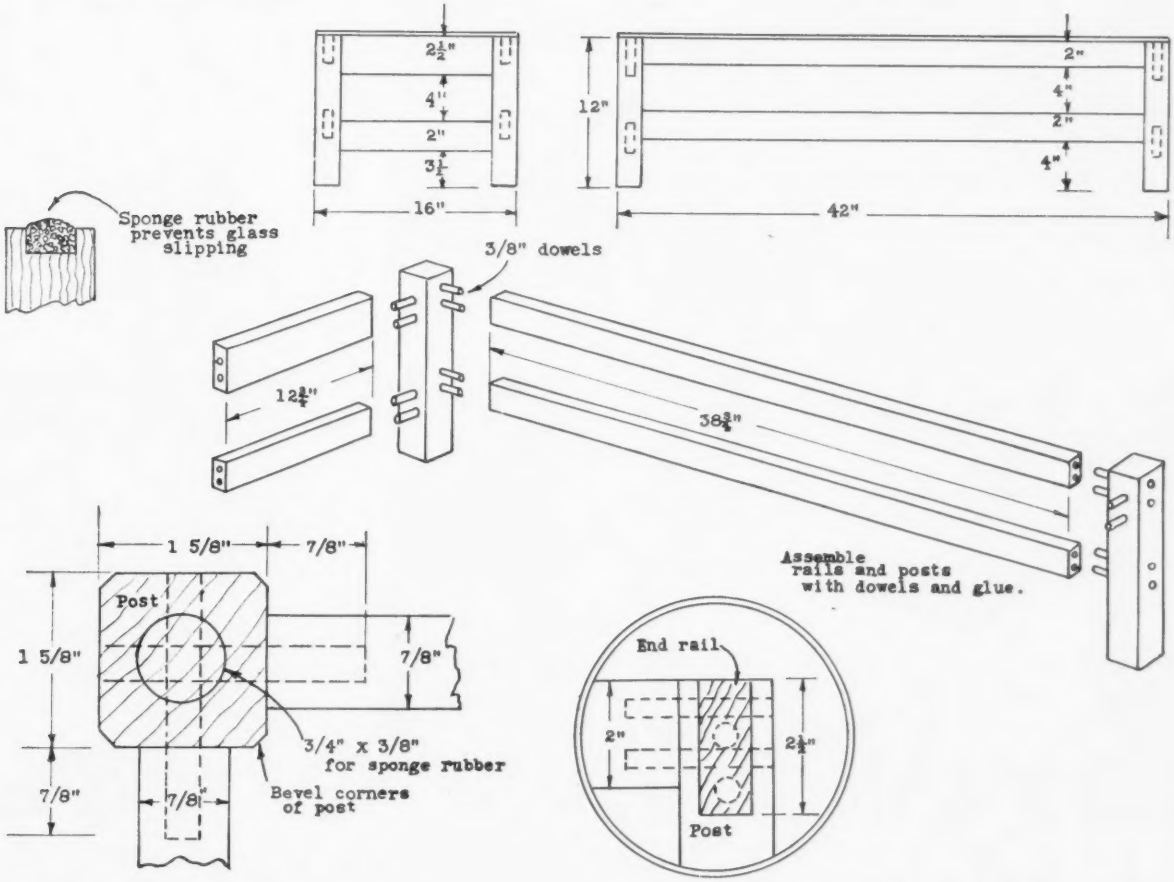


If you can drill a hole, you can make this glass-topped coffee table.

HERE IS a smart piece of furniture that any novice can build, the sole requirement being that he drill holes square with the work. There are no mortised joints or other cabinetwork, all members being assembled with dowels and glue, clamped in place until the glue has set. Inasmuch as all dimensions are given the material could be cut to size at the mill, even the holes bored and the home craftsman then would need only to assemble the piece. Maple, walnut, birch, basswood or mahogany will make an attractive table, and the glass top can be bought cut to size and edges smoothed at your local paint store. Note sponge rubber pads in the top of each post to prevent glass from sliding. Finish the wood in natural grain with shellac and wax. △ △

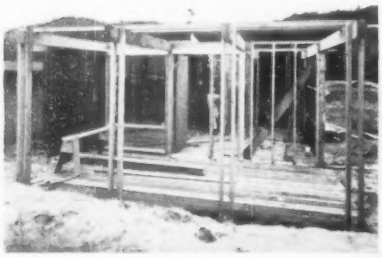
BILL OF MATERIALS

4 pieces hardwood 7/8" x 2" x 38¾", side rails
2 " " 7/8" x 2" x 12¾", lower end rails
2 " " 7/8" x 2½" x 12¾", upper end rails
4 " " 1⅝" x 1⅝" x 12" , legs
32 hardwood dowels ⅜" x 2½"
Plate glass ¼" x 16" x 42"
Sponge rubber, glue.

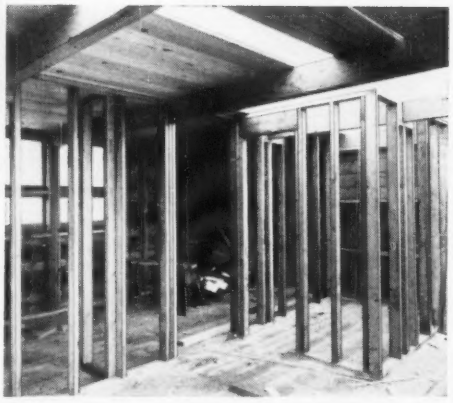


View of finished "Lodgepole Pine" vacation cabin as developed by Western Pine Association. Cabin faces directly on beach.

"Lodgepole Pine" Vacation Home



Pre-cut lumber of kit, plus pre-hung windows make it possible to frame and side cabin quickly. When fighting time and weather this is big advantage.

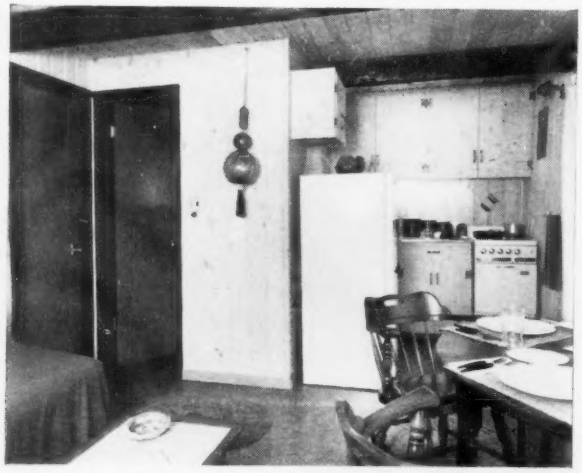


Solid lumber is used throughout for framing, roof decking, beams and flooring, as shown here in view of interior-framing of cabin.

LIKE SEVERAL THOUSAND other Americans, the George V. Skinners of Portland, Oregon caught "vacation-cabin fever." Their cure was to write for a booklet, "Ideas for Vacation-land Homes." (Available from Western Pine Assoc., Dept. MC9, Yeon Bldg., Portland, Oregon.) From the booklet they chose the "Lodgepole Pine" model, one of ten commissioned by Western Pine, for their beach lot.

Each of the cabins is as sturdily built as a permanent, all-year-around home, with double-wall construction.

Living area of cabin shows how 2-in. pine tongue-and-groove decking has been used for interior-exterior wall, cutting construction costs. Partition wall is 1-in. pine paneling; see floor plan of cabin.

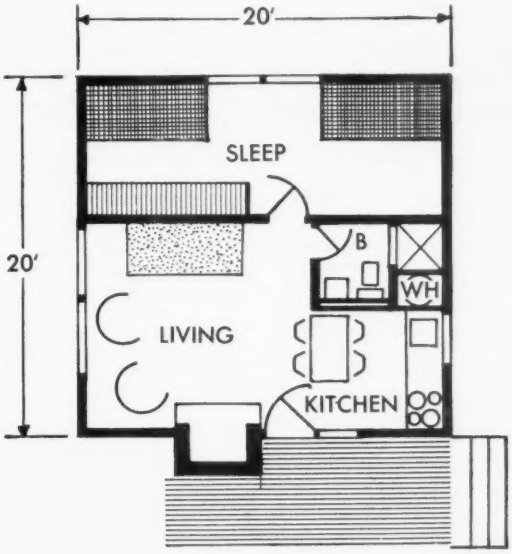


Kitchen of the cabin provides a compact work area. Cabinet space is not tremendous, but is ample for weekend needs of a family plus guests. Besides counter top visible there is fold-down counter next to refrigerator.

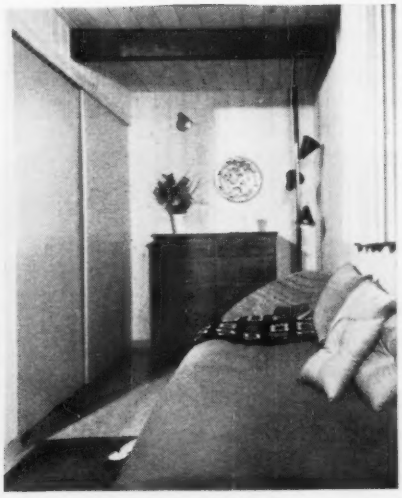
The "Lodgepole Pine," and other models, is available as a kit. The polyethylene-wrapped "package" includes pre-cut lumber, pre-assembled window and door units, electrical fixtures, wiring, and such appliances as range, refrigerator and hot-water heater, shower stall, portable metal fireplace and plumbing.

The kits cost somewhat more than if the individual pieces of lumber were purchased, but the savings in time and labor (and perhaps the cost of some labor), more than make up for the difference in price.

Cost of the kit for the "Lodgepole Pine" cabin is $3,295.00 F.O.B., Portland, Oregon. If you have a clear lot, financing can be arranged. The kits are so complete that no professional help is necessary, unless there is a definite problem of time. Some of the materials should not be left out in the weather, so it is necessary that the cabin be framed and roofed quickly. Once that part of the building is done, construction can proceed at a more leisurely pace. For more information on the kits, write to Western Pine Assoc., Production Information Div., 526 American Bank Bldg., Portland 5, Oregon. △ △



All cabinets included in kit for "Lodgepole Pine" cabin are pre-built, ready to hang. Here the Skinners are measuring for installation.



Huge closet in sleeping area has sliding doors. Flooring in house is hardboard over 2-in decking.

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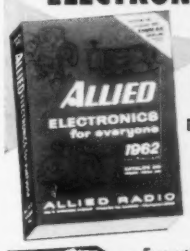

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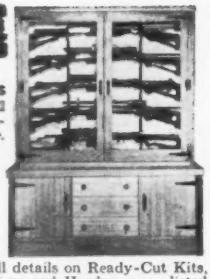

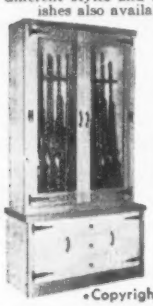

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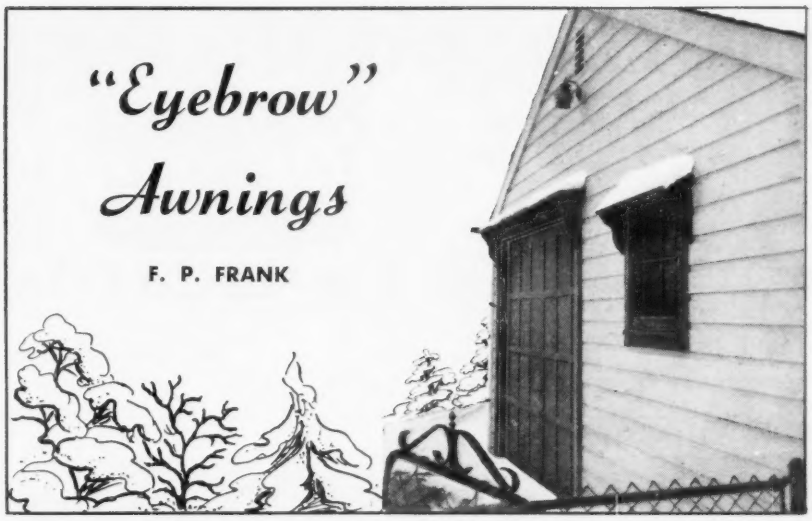

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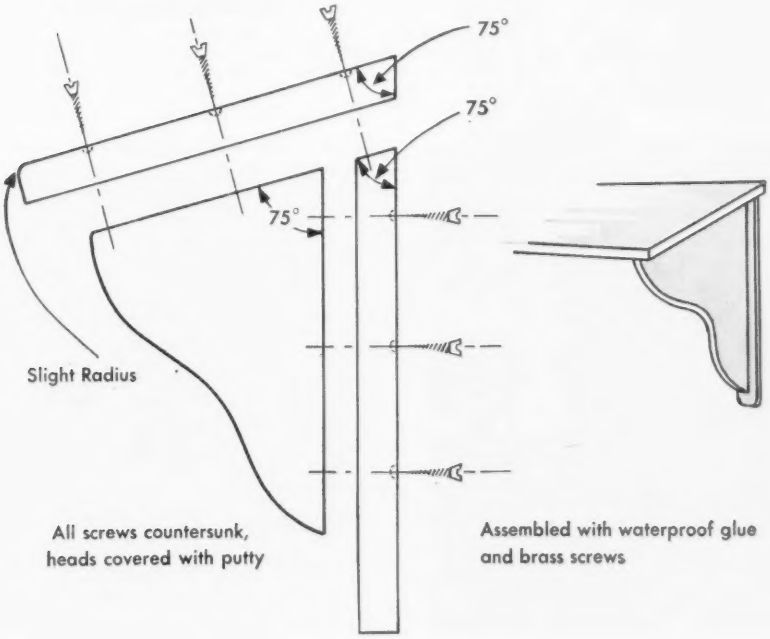

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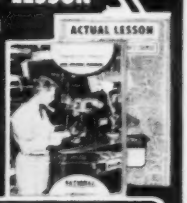

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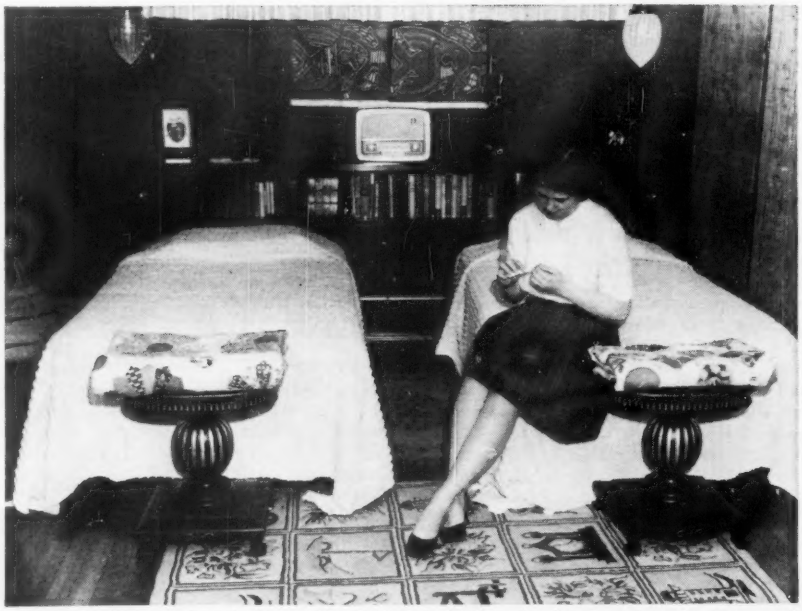
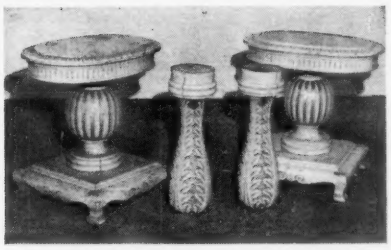


1. Classic-modern are these bedside tables finished in black and gold. Careful work with a small paintbrush and gold paint accents the interesting carving on the wood.

2. Source of the material for the bedside tables were these two pedestals, originally used for potted plants or statuary in some mansion.

YOU MAY NOT HAVE antiques in your attic, nor can afford to buy them, but quite likely you have some old pieces of furniture that are made of top-quality lumber and with excellent joinery. If you have no old pieces in the attic, there are plenty to be found in secondhand shops. Browse in these shops, looking at the various items in the light of how they could be modified, changed or rearranged to perform some other function than the one for which they originally were intended.

No need to worry about green lumber in these old items of furniture. If they are old enough they have

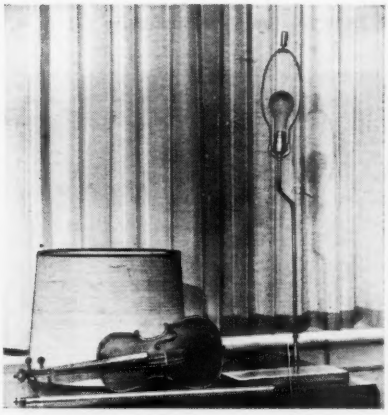


3. Simply cutting out a section of the pedestal column formed the bedside tables. Column sections could be used for modern, glass-topped table.

been seasoned by just sitting around in homes and shops. Joinery is usually quite good; it may be necessary to re-glue some of the joints, but this is no problem for a home craftsman. Do not let paint fool you. Many of the painted pieces will prove to be solid oak or other hardwood that has a magnificent grain. Paint remover, sandpaper and steel wool, plus a little hard work will bring out the hidden beauty.

The bedside tables, Fig. 1, are a case in point: Note the modern-classic look of these delightful tables finished in black lacquer and gold. They also could be finished in black and red to provide an "oriental" touch to a decor, or any combination of colors could be used. Their origin is a set of pedestals, Fig. 2, of the type used years ago in mansions, and some more modest homes, to support potted palms or other plants, or to display statuary. Cutting each column, Fig. 3, provided a ball-shape support for two low tables, producing an "Empire" design. Using the other part of each pedestal would produce slightly higher tables with a "French-provincial" flavor.

If you have a love of music, an instrument such as a violin can be



4. A violin picked up for a few dollars in a secondhand shop, a length of pipe and a scrap of lumber are materials for project.

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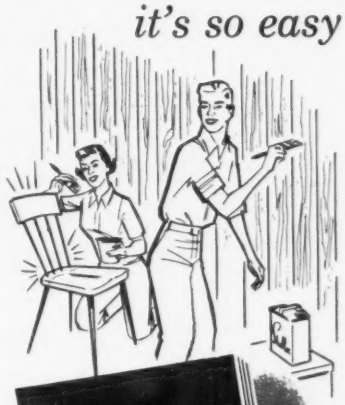

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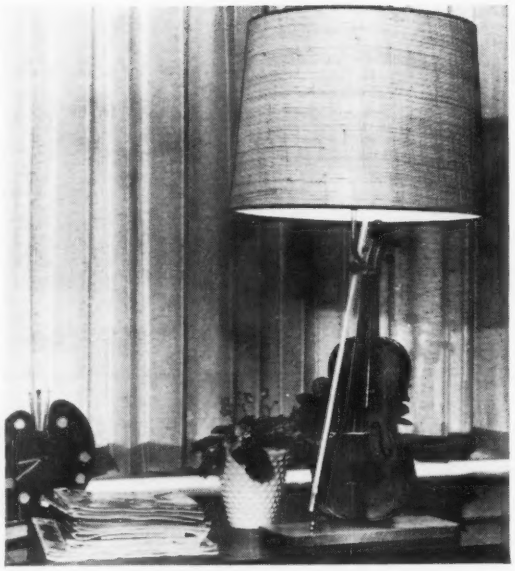
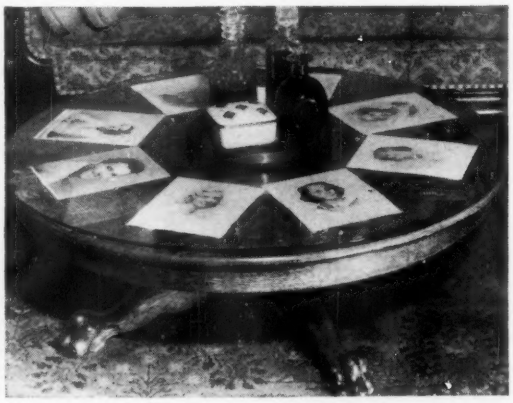


5. Pegs of the violin, and bow, are tied with wire to pipe or copper tubing used for lamp column.

incorporated in the design of an attractive lamp. The lamp column is a length of copper tubing or brass electricians' pipe bent to a shape that will accommodate the instrument, as indicated in Figs. 4 and 5. A guitar, ukelele or banjo, even a battered but well-polished saxophone or trumpet could be used as an attractive lamp-column design to indicate the owner's personality or hobby. Lamp harps and fittings can be purchased at many hardware stores; several of our advertisers offer special or unusual lamp fittings and supplies. The base can be simply a piece of well-finished hardwood, as was the base for the violin-lamp.

How often have you seen round dining-room tables in a secondhand shop; or perhaps you have one in the attic, basement or garage. Give it a second look and see if it perhaps can be up-dated as was the table in Figs. 6 through 9. The intricately-carved legs are strictly mid-Victorian, but the wood and workmanship are the best. As in Fig. 8, the first job is to remove all paint or varnish and bring out the genuine beauty of the wood. The column of the table then is shortened to bring the top down to coffee-table height. A glass top is added to protect the wood that you have so carefully sanded and finished, and the glass is used as a means of showing photos of your favorite people, Fig. 6, perhaps a treasure map, or a chart showing the presidents of the United States, so there is a bit of American history always showing with the table, Fig. 9.

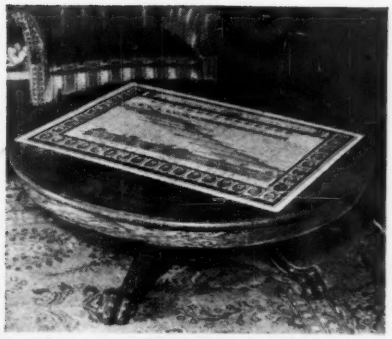
Shop carefully when looking for furniture to modernize. Because there is so much labor involved in bringing the table up-to-date and revealing the true beauty of the wood, you will not want to pay more than a few dollars for each item. Incidentally, when well done, these refurbished items of furniture will sell well, and for much more than you will pay for them. Figure the cost of your labor and material, add a reasonable profit and you're in business. For most of us, however, it is a way of using our skills to obtain attractive, low-cost furniture. △ △



6. Glass top on this attractive table holds and shows photos of your very favorite people.

7. Purchased for a few dollars in a secondhand shop table does not look like much, but has top-quality wood and fine construction.

8. First step in utilizing table is to thoroughly remove all varnish to the bare wood, sand it smooth. Column then is cut coffee-table height.



9. Still another way of using the table, with a glass on top, is to show an explorer's map, reflecting some of the owner's personalty.

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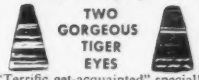

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STEP TABLE

FRED C. STEBBINS

MR. NORVILLE WEHRHEIM, who for the last few years has held the title of world's champion wood turner, recently took time out from his job as demonstrator for a leading manufacturer of power tools while at the Kansas City Home Show, to design and produce a step table as a project for WORKBENCH readers. With the addition of a dimensioned drawing this photo story lets you work along with an expert in your own shop to build this attractive and versatile table. Note that while Mr. Wehrheim is an expert, he still uses such safety devices as a push stick on the saw. All operations shown were done on a combination power tool; in your shop you may have to change some of the setups, but all operations are standard and should present no problems. White pine was used on the original, choice of the finish is left up to the individual builder. △ △

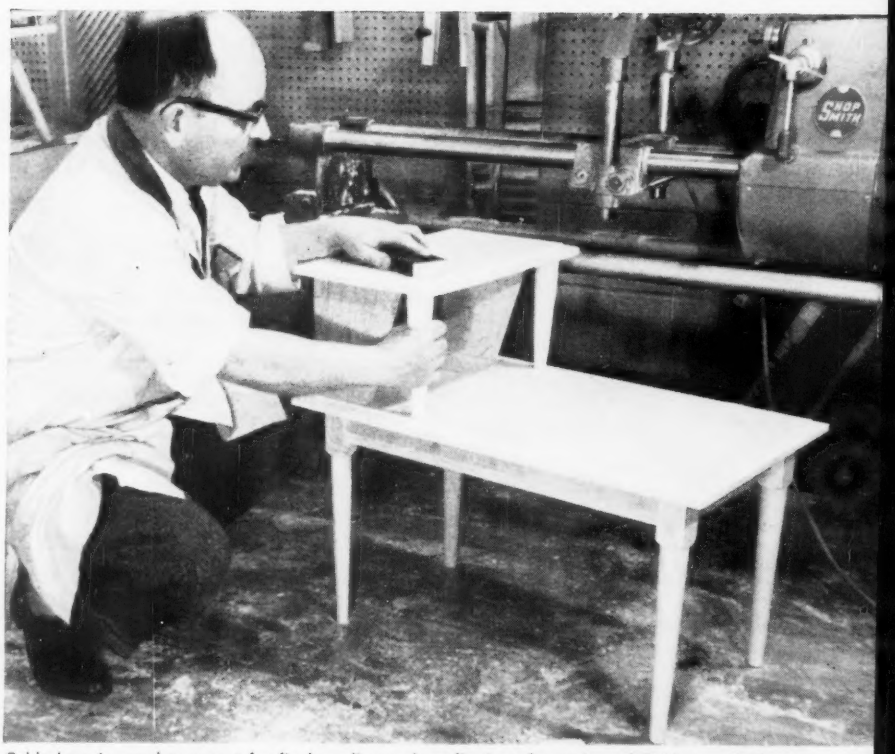
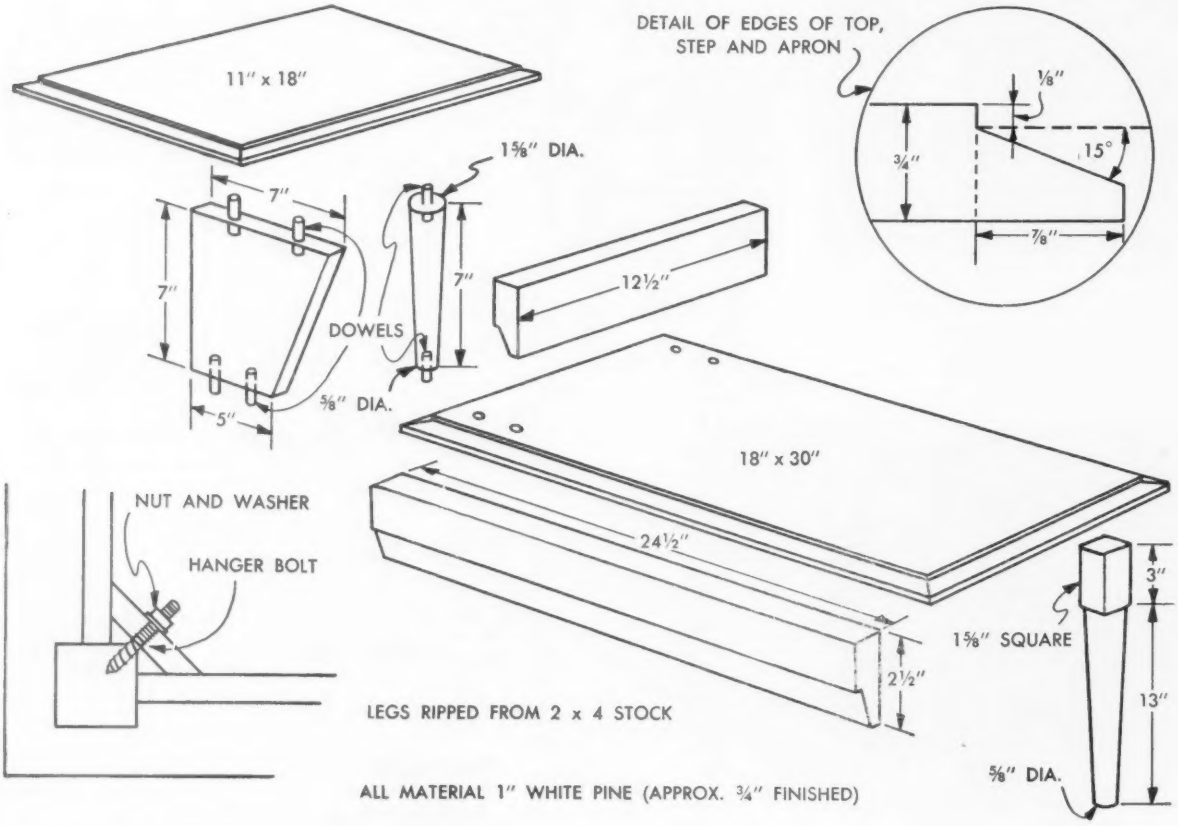
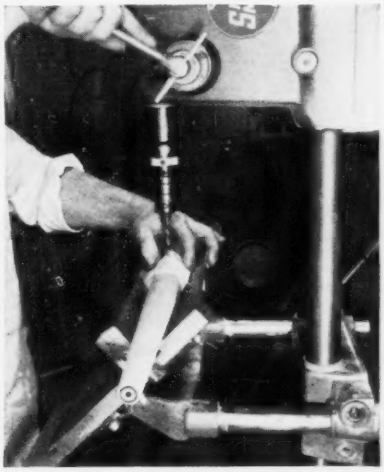


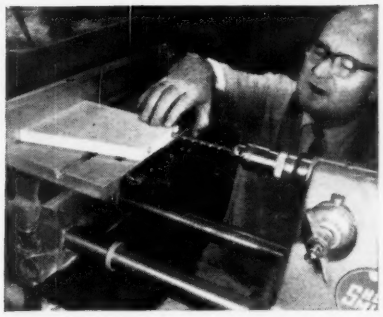
Table here is complete except for final sanding and application of a stain and finish to suit. Except for side and end aprons that are attached with screws, table is assembled with glue and dowels.



Decorative cut for edge of table top is made by setting table, or arbor, at 15 deg. Blade projects 1 in., and cut is width of saw blade at the top, (toward center of table).



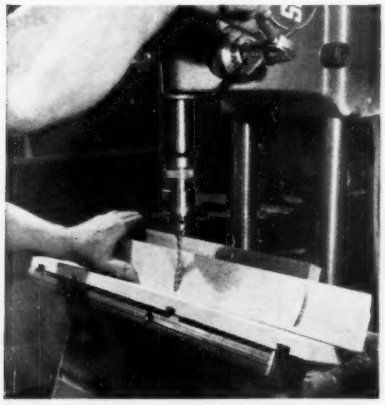
On combination tool, rip fence and table are used as jig to hold legs when drilling holes for hanger bolts, any 90-deg. V-block setup will do.



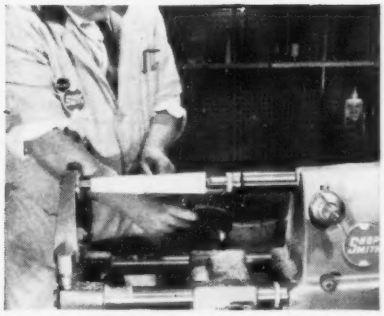
Dowel holes are required in the tops and bottoms of the side panels. Make sure holes are centered in width of stock, spaced accurately.

After careful positioning, Norv is driving screws into top through pockets in the aprons. White glue used sparingly between table aprons and top.

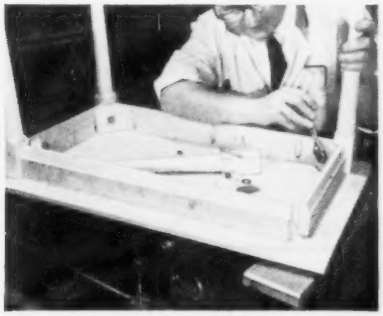
Chamfering the ends of the dowels does two things: It permits easier insertion of dowels and also allows space for glue so it is not forred out.



Holes for screw pockets are drilled ¾-in. in diameter at angle of 20 deg., then ¼-in. drill is used for shank-clearance holes for screws.



Tailstock on combination tool is offset to provide desired taper on legs, then chisel is held firmly on tool rest, as it is moved along ways.

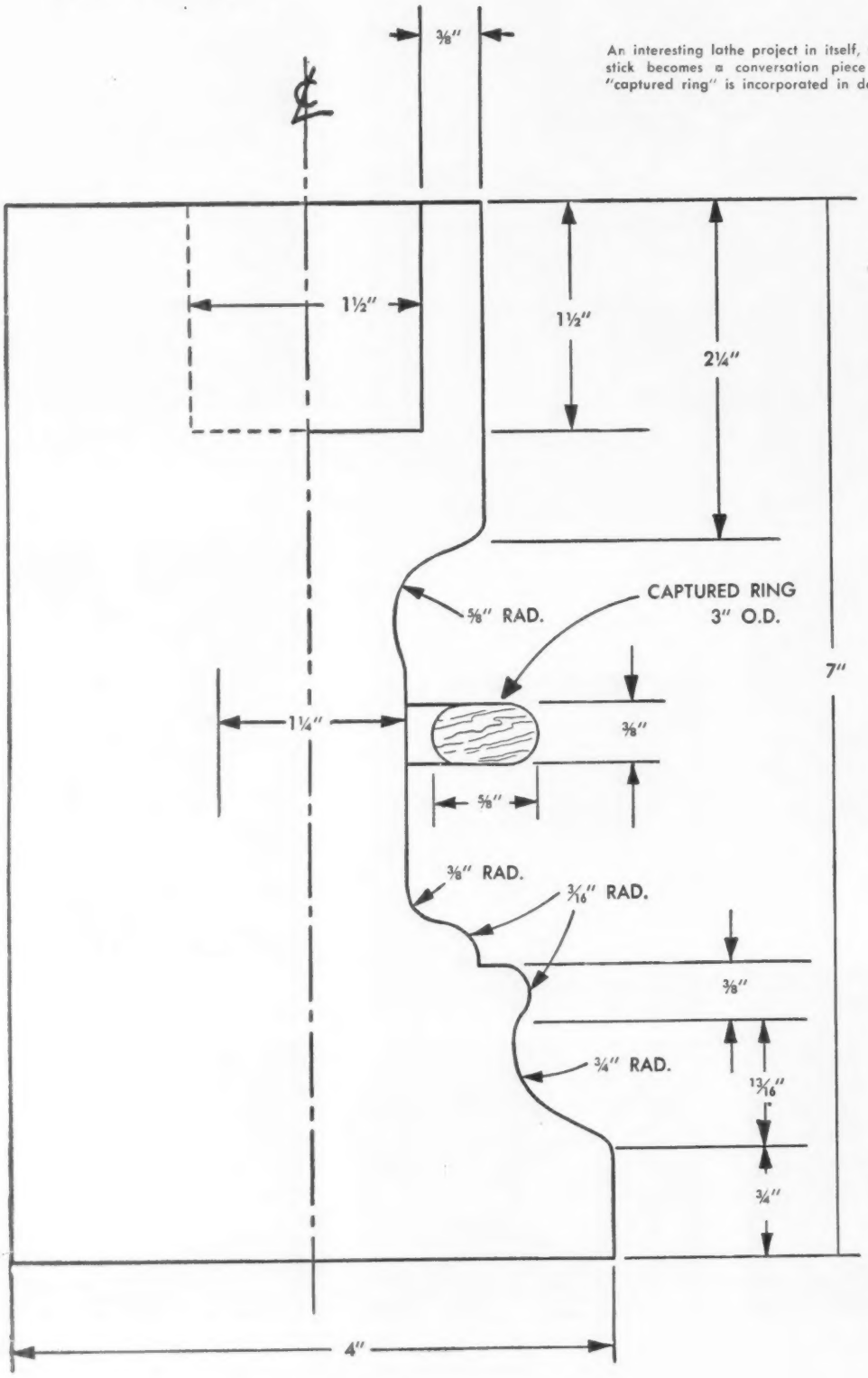


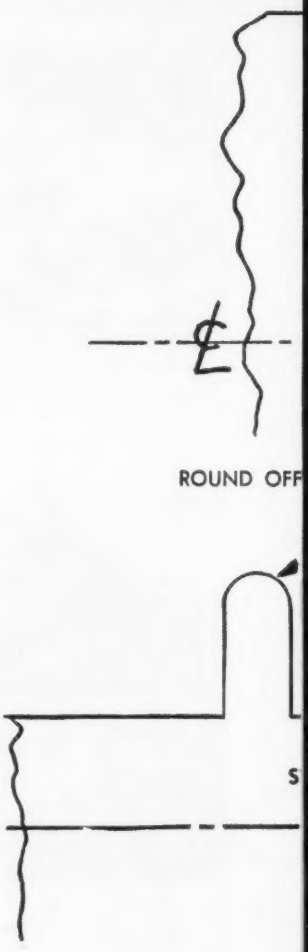
Legs are attached by tightening nuts on hanger bolts. To level table, loosen nut on bolt of short leg, then move leg down and retighten.

"Captured-Ring" Candlestick

R. J. DE CRISTOFORO

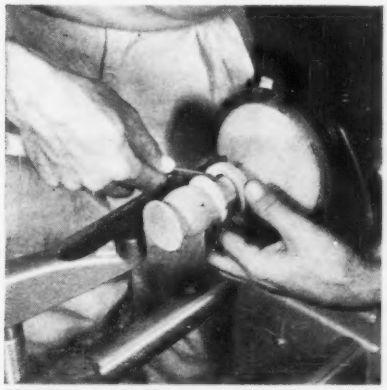
An interesting lathe project in itself, this candlestick becomes a conversation piece when the "captured ring" is incorporated in design.



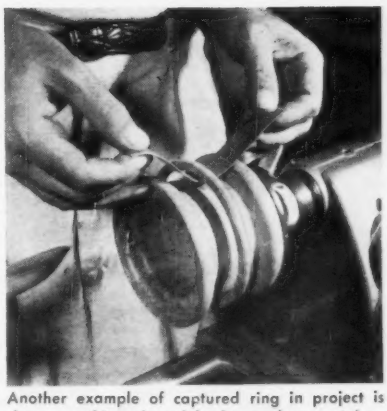


LATHE PROJECTS ARE ALWAYS FUN, but incorporating a captured ring will "turn" an attractive project into a conversation piece. Turning the ring requires no great skill, and if you plan carefully and work slowly you should be successful on your first try. The ring is part of the blank stock. The technique is to shape as much of the project as possible, leaving just enough material for the ring. On the candlestick this requires a raised band about ⅜ in. wide. The outside of the ring is rounded and sanded, then the inside circumference is gently shaped with a skew from both sides. A slight ridge left at the parting point is hand sanded. Tape the parted ring to one side, then finish the area from which the ring was removed. If you work on a faceplate, the candle socket can be turned right on the lathe; otherwise you will have to drill after turning, or drill the blank stock first and fill the hole with a removable plug to permit mounting between centers.

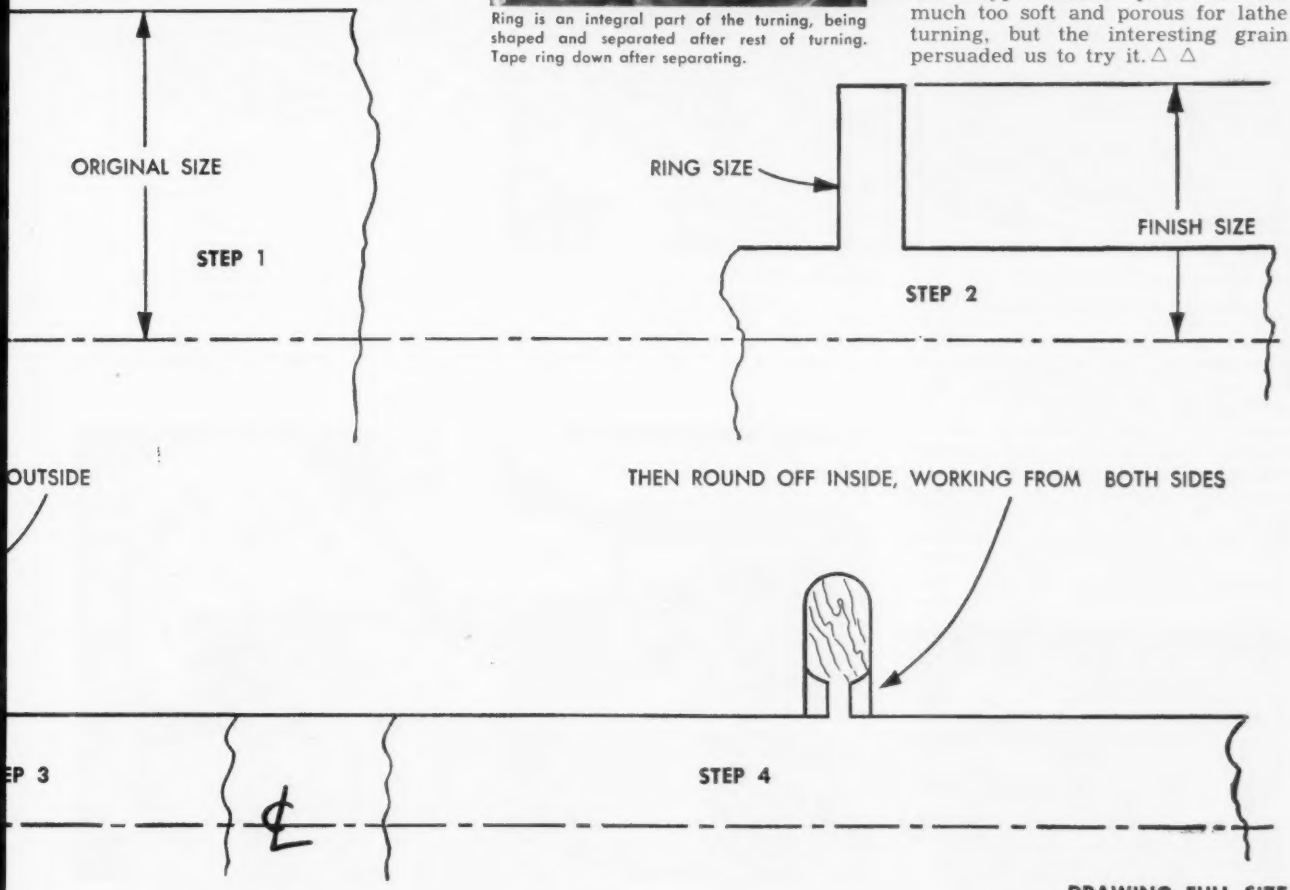
Any wood can be used on a project of this type. Ours is Apricot—a wood much too soft and porous for lathe turning, but the interesting grain persuaded us to try it. △ △



Ring is an integral part of the turning, being shaped and separated after rest of turning. Tape ring down after separating.



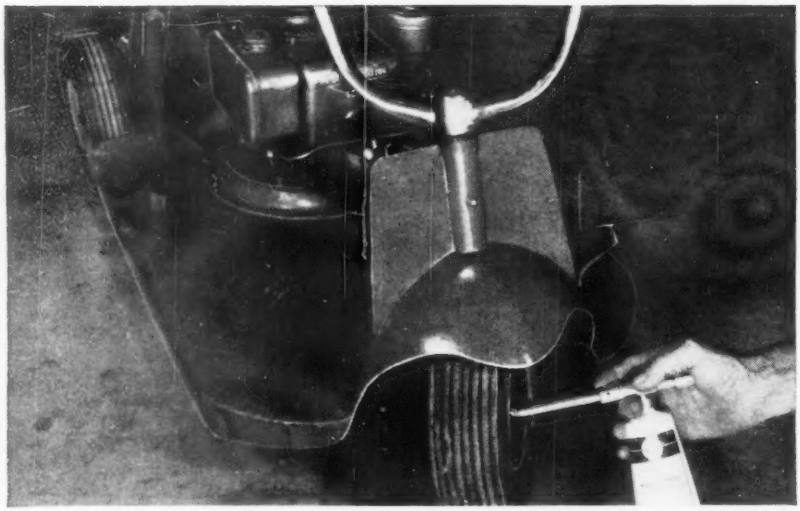
Another example of captured ring in project is shown on this redwood burl turned as container for flowerpot. Inside of ring is hand-sanded.



DRAWING FULL SIZE

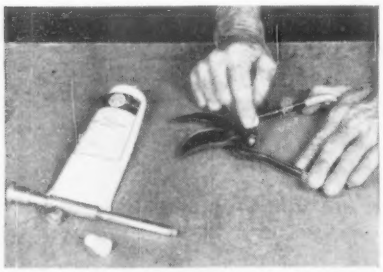
This grease gun is small enough to fit in pocket or tool box, produces enough pressure to lubricate an automobile suspension.

"Pocket-Size" Grease Gun

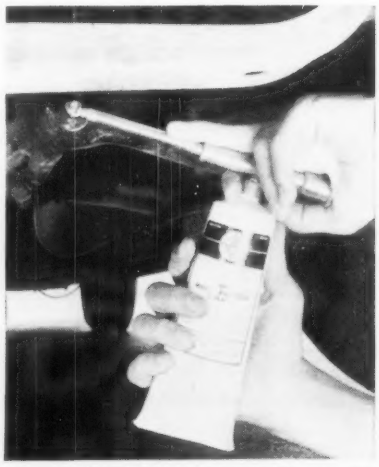


Easily held in one hand, grease gun is operated by pressing plunger with palm; nozzle will fit almost any type grease fitting.

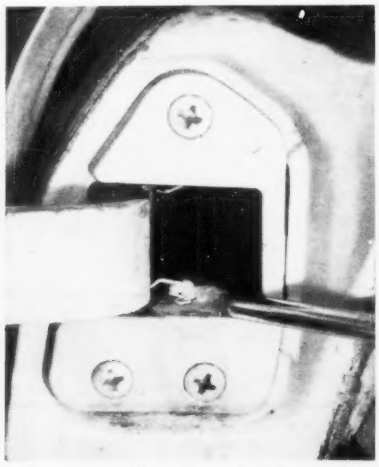
SMALL ENOUGH to fit in pocket or tool box when disassembled, this grease gun produces enough pressure to permit lubricating an automobile. Because of its compact size it is ideal for boat, car and home shop. The specially-formulated grease is heat, water and wear-resistant, which makes it ideal for packing the wheel bearings of boat trailers that often must be immersed in water, salt and fresh. The plastic, non-breakable tube of grease simply is screwed onto or removed from the gun for storage or carrying, or when the grease is to be applied other than with the gun. By special arrangement the Jiffy Luber and one tube of grease can be purchased for $1.98, the usual price of the chrome-plated gun alone. Extra tubes of grease are 98 cents each. From Engineers' Choice, Div. of Interstate Oil Co., Inc., Dept. J, P.O. Box 798, Packers Station, Kansas City, Kans. △ △



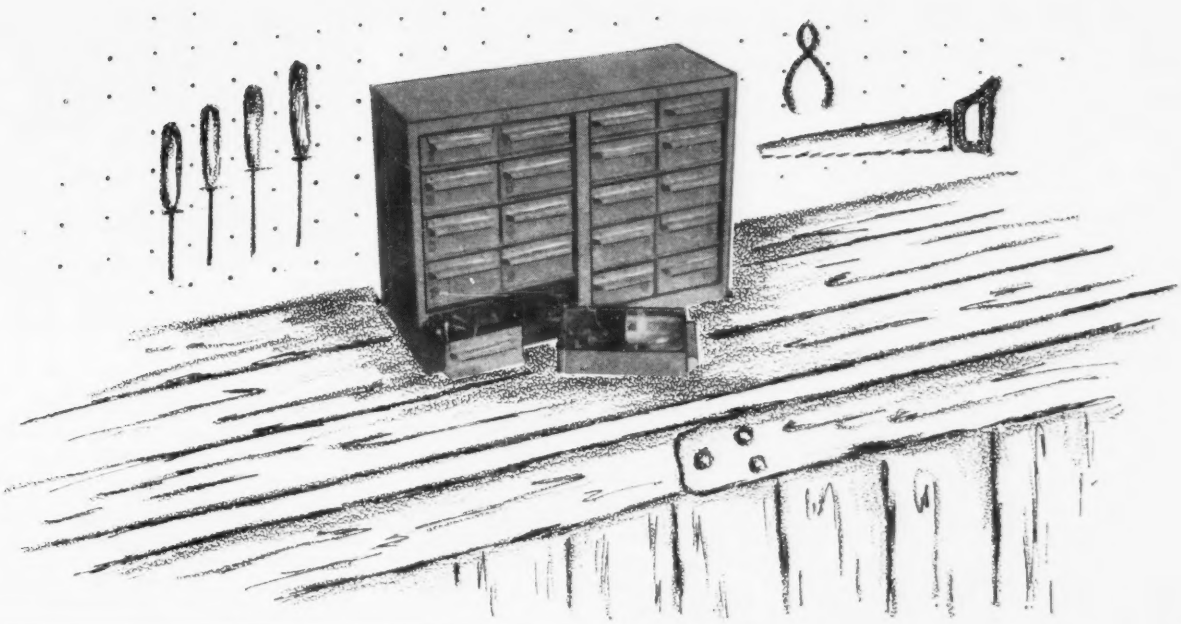
Gun is easily unscrewed from plastic tube of grease, permitting lubricant to be used on such items as these garden shears, door latches, etc.

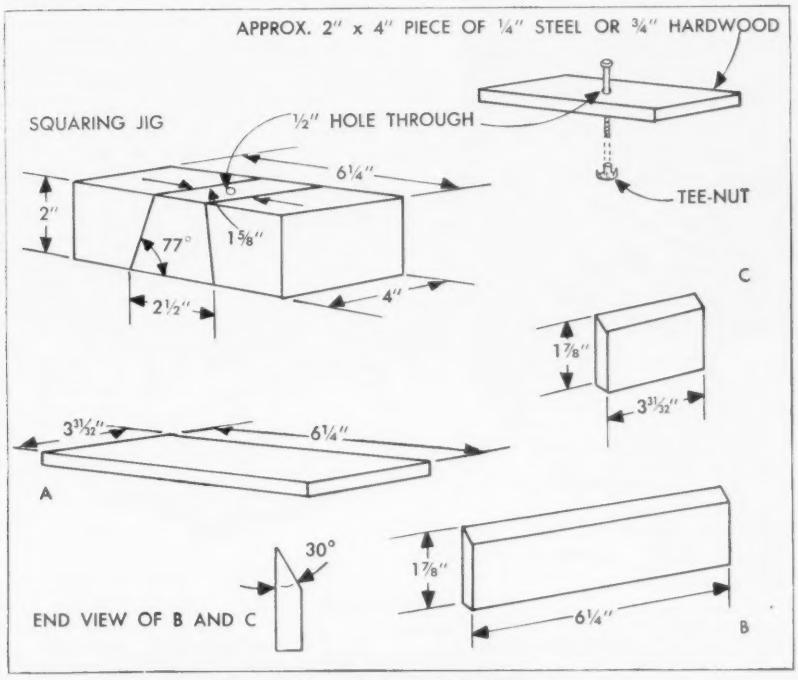


Save on those front-end grease jobs on your car; do the job yourself, whenever the car needs it. Saves on time, too.



Long nozzle of the gun is ideal for reaching into locations not often greased, such as the recessed inner ends of automobile-door hinges.





Cost-Free Small-Parts Drawers

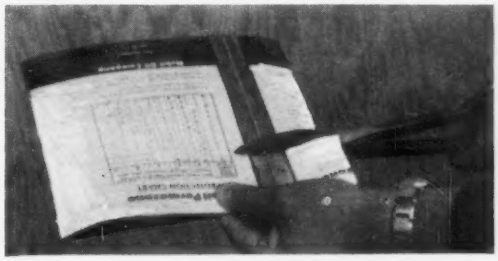
JOHN KOVACS

EVERY WORKSHOP OWNER needs small-parts drawers for the dozens of miscellaneous items required for so many projects. Here is a method of making such drawers from material that costs nothing, in a manner that requires no soldering, welding or other mechanical fastening.

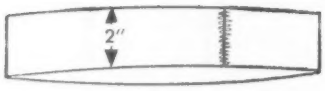
First step is to go to your local gasoline service station and ask for several of the round 1-gal. cans in which oil or anti-freeze is contained. Although empty anti-freeze tins are more easily cleaned, the time of year

Metal for small-parts drawers is obtained by cutting the ends, including rolled seam, from 1-gal. oil or anti-freeze containers with snips.

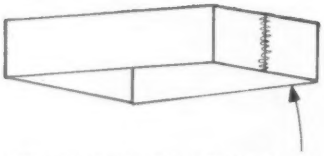
After cutting off ends, flatten tins so that the seam is about 2 in. from the fold, as indicated here, then cut the container into strips.



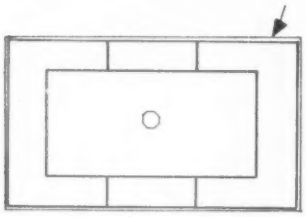
STEP 1



STEP 2,

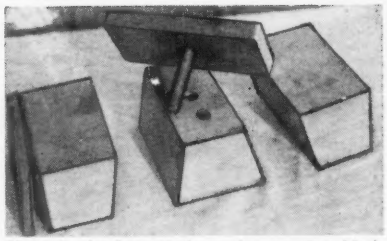


SQUARING UP ON FORMING JIG



will determine which type container is available. When you get the tins home, cut off both ends, including the rolled edge. After this operation you quite likely will end up with rough edges on the metal, so be careful. Flatten the tins so that the seam is approximately 2 in. from edge of the resulting double-thickness sheet. Next, scribe a line along each of the cut edges, squaring from the end folds and recut the metal to produce a straight, clean edge. Scribe and cut as many 2-in.-wide strips from each flattened tin as possible. One strip is required for each drawer you wish to make. Several of the containers are required for the drawer bottoms. Cut the ends off, as described, then cut each tin along each side of the seam to remove it, and flatten the container to produce a sheet of metal on which the bottoms can be scribed. The bottoms measure 4¼ x 6½ in., and the rectangles should have square corners.

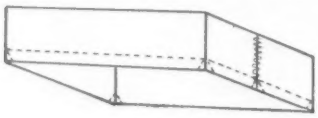
To form the drawer sides, open the flattened strips and place jig C with one end against one fold and rough-form the adjacent corner. Repeat this with the other fold and corner.



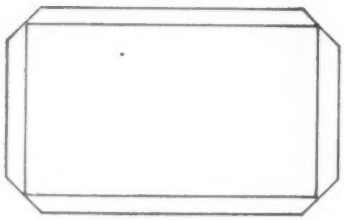
Shown is the form to shape drawers. Top block and shims can be metal or hardboard.

(We made several of these drawers in the Model Shop and found we could by-pass the step in which jig C is required, and go on to the use of the forming jig. Ed.) Next step is to make the forming jig to the dimensions shown. It is sawed apart at a 77-deg. angle to form three pieces as indicated. It is sawed apart after being cut to the dimensions given. The form must be true and square, but the dimensions are not critical, and the angles can be varied. Basically, the angles are to assure that a wedging action is produced when the bolt fitted in the top plate is turned in the Tee-Nut of the form.

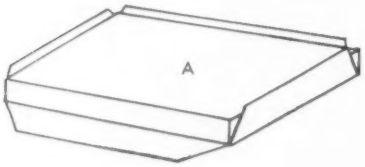
STEP 3,
MARKING BEND, NOTCHING CORNERS

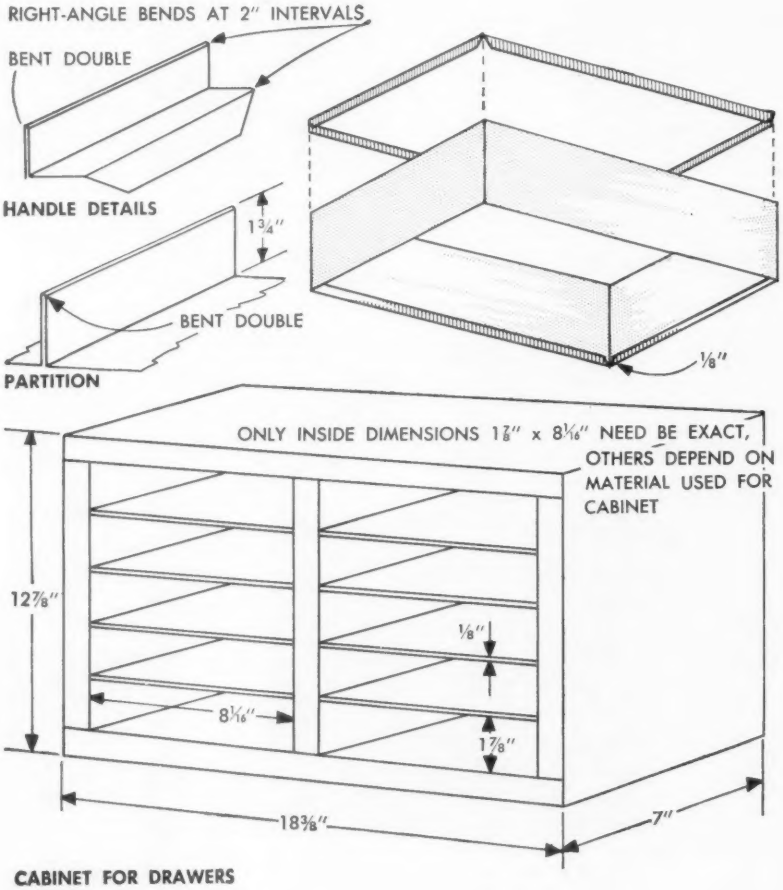


BLANK FOR BOTTOM



STEP 4
FORMING BOTTOM ON JIG A





CABINET FOR DRAWERS

Flanged drawer bottoms are fitted in drawers so flanges on sides mesh, then all flanges are crimped together tightly.

One end of the finished form is faced with sheet metal or tempered hardboard, the opposite end is fitted with shims of varying thickness. The shims are necessary as the different tins will vary somewhat in diameter, and this variation is taken care of by adjusting the length of the form.

After each drawer has been formed on the jig, scribe a line ⅛ in. from one edge, all the way around the drawer. Snip a small "V" at each corner, and cut out a section of the seam to a depth of ⅛ in. Jigs B and C now are used to form the flanges on the bottom edges of the drawer sides. The angle on each of the jigs is approximately 30 deg. However, this is not critical. The main purpose of the angle is to position the flanges so they can be closed easily against the flanges on the drawer bottoms. Clamp the sides between the jigs and a piece of wood or metal to back up the thin metal and bend down the flanges to the inside of the drawer. Note that the jigs B and C are 1⅞ in. deep; this measurement determines the final height of the drawer sides and completed drawer.

Drawer bottoms are now flanged with the aid of jig A. The jig is cut from ⅛-in. tempered hardboard or steel, and the sides are kept accurately parallel, the corners square. Each blank for the bottoms has the corners cut as indicated, then it is clamped between jig A and a piece of backing material and the flanges are bent to a 90 degree angle.

Slip the bottom in each drawer frame, flanges down, until the flanges fit into those on the drawer frame. Use a vise or clamp to squeeze the flanges on the frame over the flanges on the bottom, and the drawer is complete. One-piece handles can be bent from metal, as shown, and partitions also can be made. The handles may be attached to the drawer fronts with contact adhesive if only light items are to be stored, but a couple of aluminum rivets will assure that the handles will stay on when heavy items are placed in the drawers.

A cabinet for holding 20 of the drawers is dimensioned; the design can be modified to hold more or fewer of the drawers. △ △

CORRECTION

In the article "Modern Coffee Table," pages 32-33, July-Aug. issue, tenons on the stretchers should be ½ in. wide, not ¾ in. as shown. Top and stretchers are 1-in. stock (approximately ¾ in. finished).

IN THE NEXT ISSUE . . . . .

Build A Baritone Ukelele
Furniture-Block Puzzle
Giant Chest of Drawers
Mitering Clamp
Part II Kitchen Cabinets
Carve A Folding Wooden Spoon

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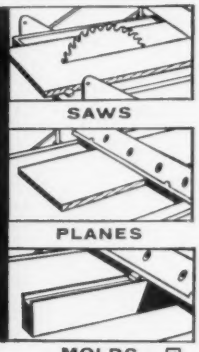

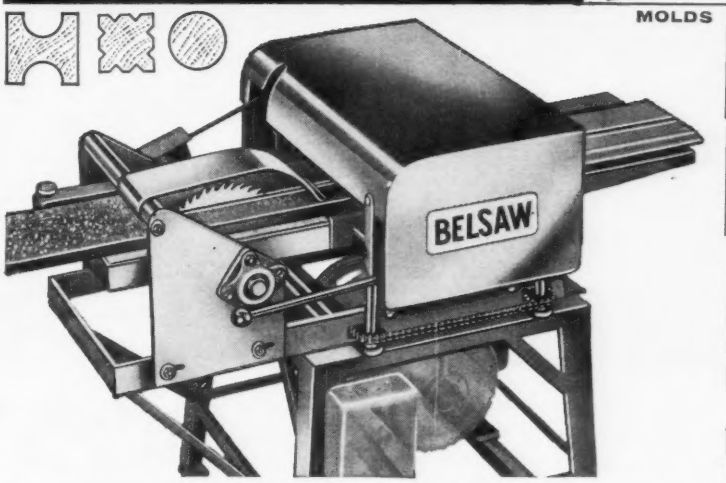

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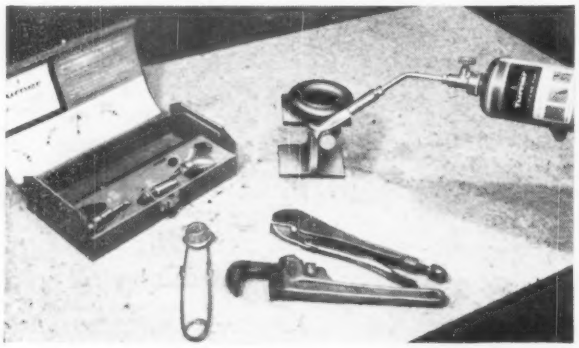
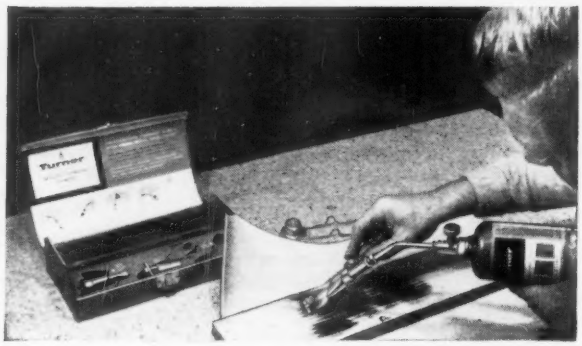
Propane torch tested in Model Shop was Turner kit illustrated. It has small and large tips, solder tip, flame spreader and spark igniter.

PROPANE TORCHES

One of the most labor-saving of all the applications of a propane torch is loosening nuts and bolts that are "frozen" with rust. The metal is quickly raised to a high temperature.



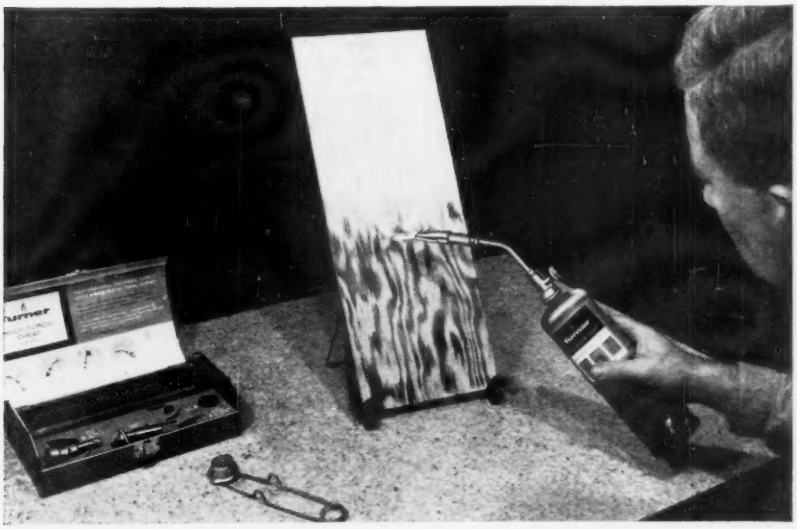
Flame spreader used with large or small tip, depending on size of job, softens and loosens paint for easy removal with putty knife. Because of intense heat, care must be taken to prevent burning wood.



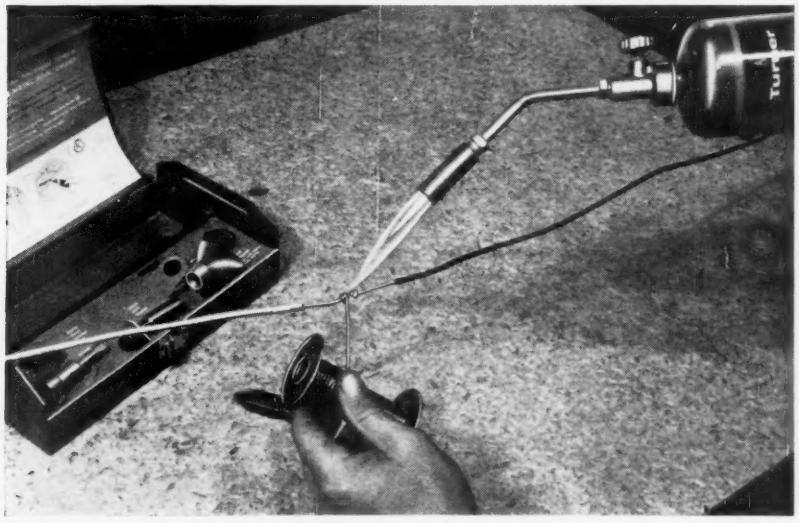
EVERY WORKSHOP should include a propane torch in the inventory of tools. The torch tested in the Model Shop is the kit, which comes with its own metal tool chest. Included with the torch are a light-duty and heavy-duty flame tip, a flame spreader for use with the heavy-duty tip and a soldering tip. Also included is a spark igniter, of the type used for lighting oxy-acetylene torches. The igniter certainly saves on matches, and prevents overheating cigarette lighters in the torch flame.

It would be impossible to illustrate the many uses of a propane torch, and only a few are shown. Removing stubborn layers of paint from wood is one real time-saver possible with a propane torch, and large soldering jobs are a snap with a propane unit. Among some of the many uses not shown are lighting charcoal for a barbecue, lighting a fire in a fireplace and firing up a trash pile that has become damp. If you work with jewelry as a hobby, a propane torch can be used for soldering and silver brazing. If you want to bend and shape steel flats, angles and round stock, the torch will quickly heat the metal to a red glow for easy bending.

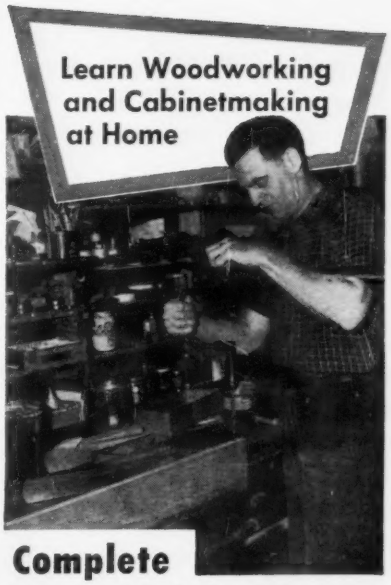
Propane torches can be purchased other than in kits, and you may have need for only one of the several sizes of tips available, and perhaps only one of the tip accessories. We would recommend the spark igniter, as our tests and experiences show it to be a real time and trouble saver. When the tank of the torch is empty, it simply is discarded and a new one fitted on the torch. Fresh tanks are inexpensive, readily available. For more information: Turner Corp., 821 Park Avenue, Sycamore, Ill. △ △



"Antiquing" plywood, or other lumber is another application for the versatile propane torch. Passing the intense flame over the surface of the wood chars the softer portions of the wood, causes the resinous areas to stand out. Stain or paint can be used for two-tone effects.



Quick soldering is a snap with a propane torch, especially when working with objects too large to be heated by soldering iron or gun. For lighter work the solder tip slips over the flame tip, producing a constant-hot soldering copper that will really flow on solder.



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HUMIDIFIER KIT

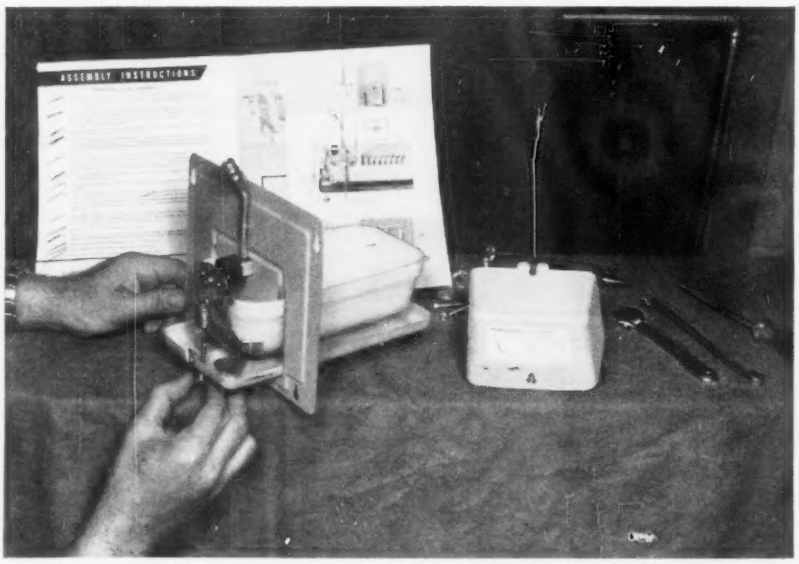
Humidifier kit comes complete with easy instructions, all parts in labeled packages, and template for cutting hole in furnace plenum.

MOST HUMIDIFIERS for forced-air furnaces are quite large, as well as expensive. And, because most of them are made of metal, they eventually rust or corrode through and start leaking into the furnace. The humidifier unit shown in this article is low in cost, is easily installed and appears to be more long-lasting than any unit we have seen.

The pan of the humidifier is glass, which immediately eliminates the problem of rust and corrosion. The automatic valve is a rubber disk and needle, which avoids the problems that occur when dirt and deposits build up on the surfaces of all-metal valves. The assembly of the kit is simple, clear-cut instructions being provided. Installation of the completed humidifier can be done by any homeowner. Instructions are simple and complete, and only a few tools are required.

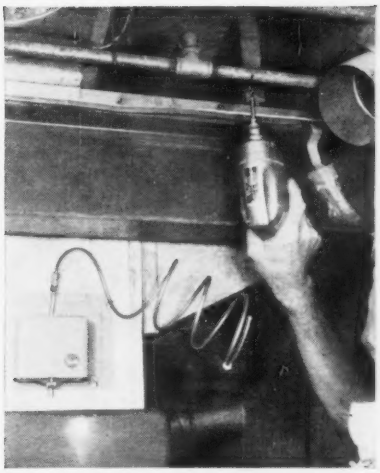
First step, of course, is to assemble the unit. All parts are wrapped or in packages that are marked to show what is contained. After the unit is completely assembled, a template provided is used to mark the required opening on the plenum of the furnace. Several holes are drilled inside the pattern to permit the insertion of tin snips, and the opening is cut. Sheet metal screws then are driven into the metal of the plenum and allowed to project about 1/8 in. Next, centerpunch a mark on a cold-water pipe near the furnace and drill a 1/4-in. hole. The needle valve and saddle then are clamped on the pipe as per instructions. The copper tubing supplied now is connected to the saddle and to the humidifier. The plates in the humidifier then are saturated with water and the assembly fitted into the plenum. Water level is adjusted to a maximum of 1 in. and a minimum of 1/2 in. After all adjustments have been made the cover is fitted in place and held by tightening a screw.

The Skuttle Model K-711 Humidifier

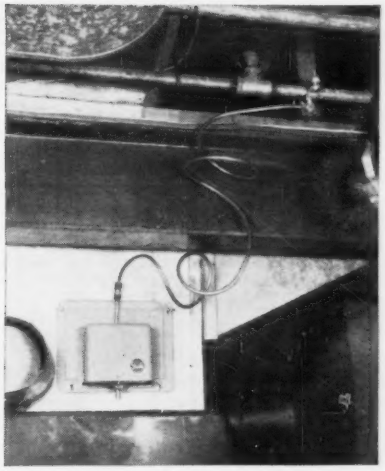


Assembling simple, fool-proof valve is easy. Its design eliminates any later corrosion problems that often occur with float-value systems. Heat-resistant glass container also avoids this problem, encountered even with plated-metal containers. Valve is controlled by weight of water in container.

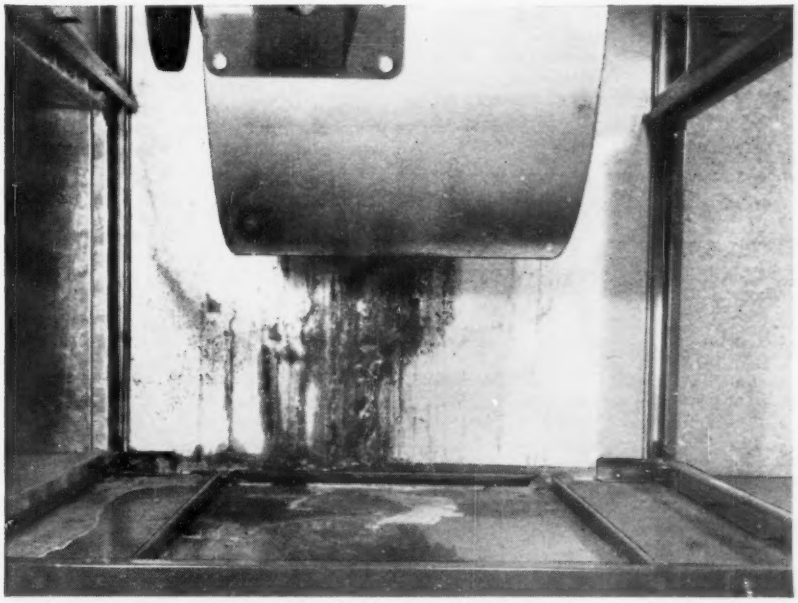
With template provided cutting hole in plenum is simple job. Carbon paper is used under pattern to trace it, holes drilled for snips.



Water supply is run from nearby water pipe, clamp-on saddle is provided, eliminating need for any pipe work. Saddle is installed simply.



Here humidifier is installed, adjusted, ready for operation. Note that section of hot-air duct was removed, (at left) for clearer photos.



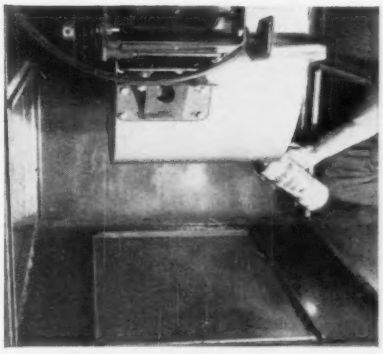
Check of furnace after installation of humidifier shows that unit removed had leaked badly, back plate of furnace shell behind filter was badly rusted. This is gas-fired, forced-air furnace. If your humidifier has leaked due to rust and corrosion, better check for this condition.

Panel was loosened for easier working, corroded area wire-brushed thoroughly. Rust-sealing type of paint was applied from spray-type container.

depends on the sweep of warm air over the wetted evaporating plates to transfer moisture into the air of the home, and is designed for installation in a square, vertical furnace plenum only.

As an interesting sidelight, when the humidifier was being installed, it was discovered that the humidifier formerly used had corroded through and dropped water into the cabinet of the furnace. The rust and corrosion produced would shortly have made necessary the replacement of the panels in parts of the cabinet. The effected parts were wire-brushed thoroughly, then coated with a rust-sealing type of paint from a handy aerosol can. We recommend checking your own furnace for this problem when installing a new humidifier, or checking the furnace.

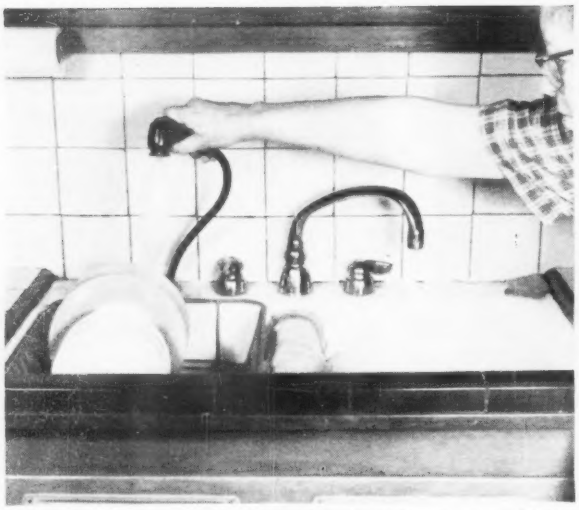
For further information on Skuttle Model K-711 Humidifier write Skuttle Mfg Co., Milford Michigan. △ △



After panel was painted, it was screwed back into place, then screws were painted over and joints sealed with the special paint.

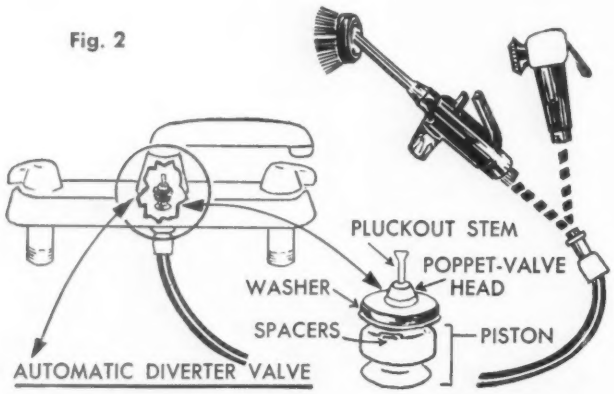
Servicing Spray-Type Kitchen Faucets

PAUL COREY



1. Illustrated is common style of spray-type faucet found on most kitchen sinks. When valve on spray head is pressed, water is diverted to it.

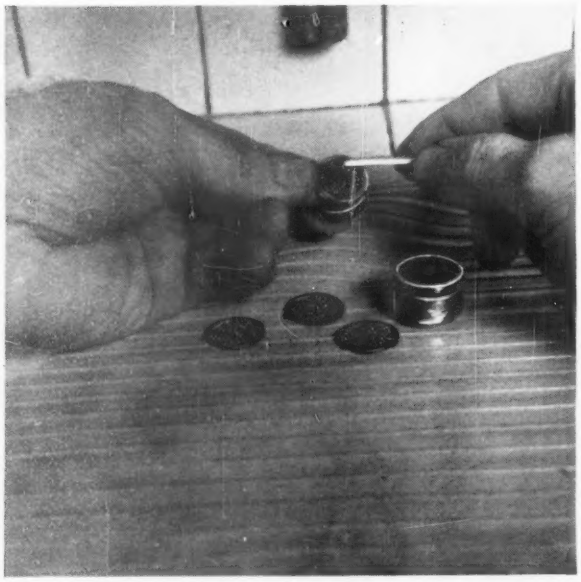
Fig. 2



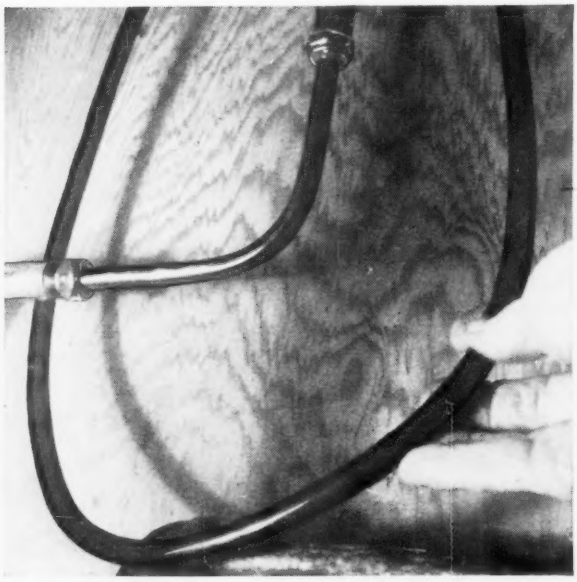
THERE ARE about 25,000,000 kitchen faucets with automatic sprays. If you haven't had to trouble-shoot yours yet, the time may not be far off.

The standard kitchen-sink faucet, Fig. 1, has a single or double-handle water regulator, a swing spout with an aerator nozzle and a diverter valve that sends water to a hose when a valve on the spray head is pressed. Spray head can be rinse type, Fig. 1, or brush type, Fig. 11.

With most faucets the biggest problem is with the aerator on the swing spout. When water flow is reduced, remove the areator and clean it, Fig. 3. One type, as shown, has several screens and a perforated disk; another type has a sort of "gear-plug" and a screen. Check the hose of the spray head to make sure it is not kinked or hooked over a pipe, Fig. 4. For freer hose action,

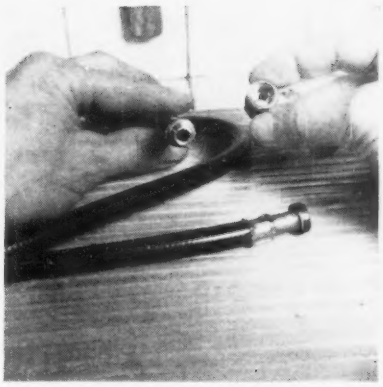


3. When water pressure seems to reduce, first step is to remove aerator nozzle and clean the parts with toothpick and brush. This is screen-type.



4. Check hose under the sink to make sure it can move freely, is not kinked when spray head is pulled up. If hose is old, replace it.

5. You can assure better action, as well as provide more hose length by adding a 6-in. pipe nipple and 90-deg. ell as shown.



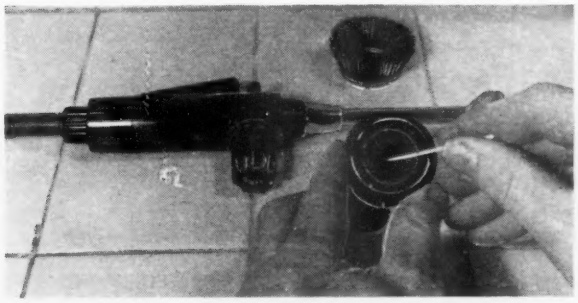
6. Replacement hoses for spray-type faucets come with a universal coupling so they will fit any of three types of connections in use.

7. When checking out spray head, remove end, run water through it to flush out any debris, and to assure that head or hose is not plugged.

and more length, add a 6-in. pipe nipple and a 90-deg. elbow, Fig. 5, to the hose connection under the sink. If the hose needs to be replaced, first remove the spray head, Fig. 9, drop the hose through the hole in the sink ledge, then unscrew it from the connection under the sink at the diverter valve. Wall-mounted faucets generally use a 30-in. hose, sink-ledge-mounted faucets use a 48-in. length. All hose fittings are the same at the spray end, but one of three types will be used at the faucet end. Replacement hoses are fitted with universal couplings, Fig. 6, that will fit all types.

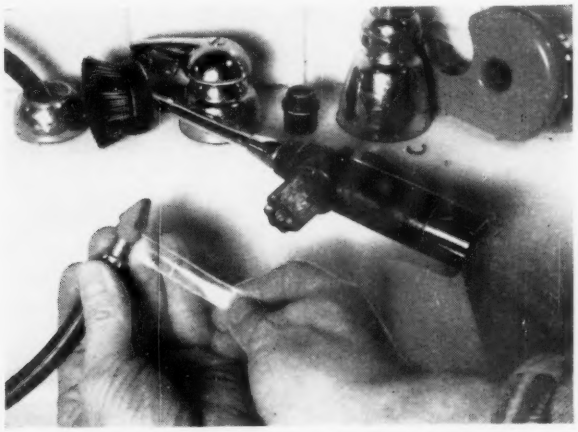
To check the spray head, remove the end and depress the valve so the water flushes out any foreign matter, Fig. 7. Brush-type spray heads with multiple-hole nozzles will require cleaning as well, Fig. 8. If this treatment does not correct the problem—and the diverter valve is working—do not take the spray head apart. Remove it and send it to the Automatic Spray Service Center, 1700 E. 58th Place, Los Angeles 1. While the head is in for repair, use a cap-type pencil eraser to seal the hose, Fig. 10. If you want to replace a rinse-type spray head, Fig. 1, with a brush type, Fig. 11, you will need to change the hose guide. The brush will not stand upright with the flat-type guide, Fig. 11.

If the faucet still does not work properly, check the diverter valve. These seldom go bad, but some types of water eat away the metal or flakes of scale can cause problems. The valve rests in a cast-in cup at the



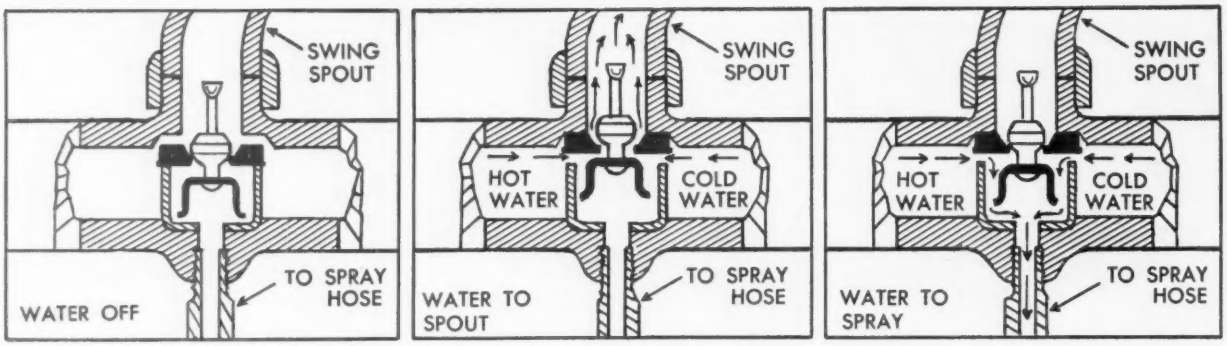
8. Remove the rubber cap from the brush-type spray head and clean out the holes. Also run water through the unit to flush out foreign matter.

9. To remove spray head from hose, unscrew it from the base part, then remove snap ring from around brass end of the hose.



10. If spray head is to be sent in for repairs, seal hose end with cap-type pencil eraser, tape it firmly in place, as indicated.

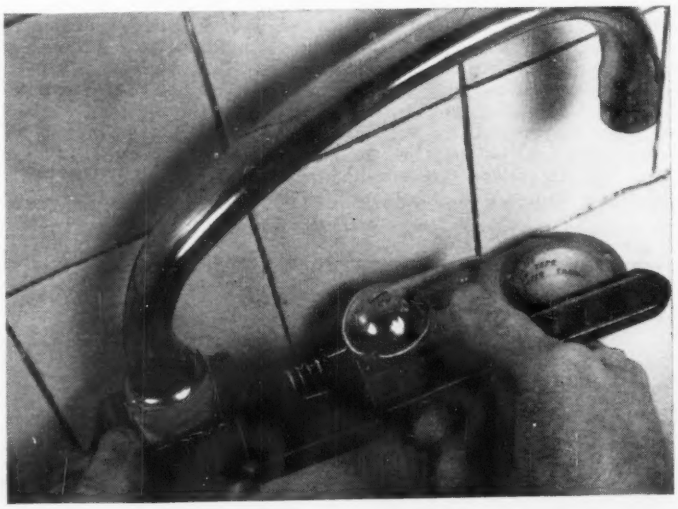
11. If you replace the spray-type head with brush-type (used as dish washer), cup-style hose guide is required. Guide for spray is at left.



12. Diagrams show how diverter valve reacts when water pressure acts on various surfaces to direct water to spout or spray head.

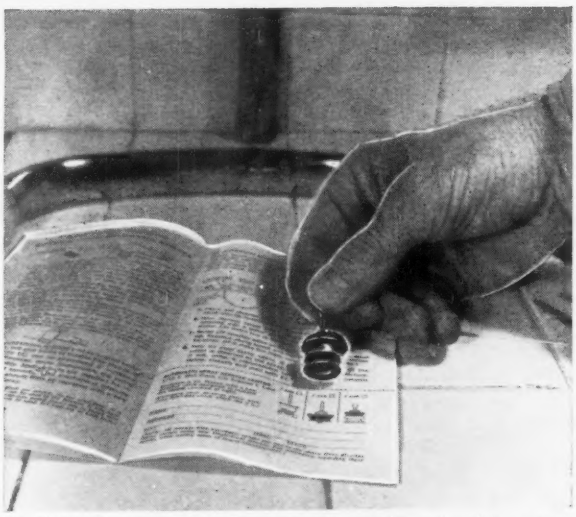
base of the swing spout, Fig. 2, above the spray-hose connection. It operates when the valve on the spray is actuated. Movement up and down in the cup is caused by the force of water pressure against surfaces of unequal area, Fig. 12. When water is off, the diverter valve rests in the cup that is part of the faucet body. Surfaces against which water pressure works are: A; face of poppet-valve head, B; top surface of piston, C; bottom surface of piston. When water is on and flows to spout, pressure on A plus C is greater than on B so piston unit is raised. Water then flows around spacers on piston top, through washer and into swing spout. When valve on spray head is depressed, water flows to spray head because pressure against C is relieved into hose. Pressure against B, which has larger area than A, forces piston unit down to close opening to swing spout. Water flows to hose.

To remove the diverter valve, first unscrew the collar on the swing spout, Fig. 13. Tweezers can be used to remove the valve, Fig. 14, or long-nosed pliers. If the valve is damaged, and cleaning cannot correct the problem, replace the valve. Generally one of three types, Fig. 15, will fit your faucet assembly. However, some single-lever faucets will require special-type valves. In this case, write to the Service Center, giving the name of the manufacturer of the faucet, or contact the local dealer that handles that make. A free catalog of parts is available from the Service Center. △ △

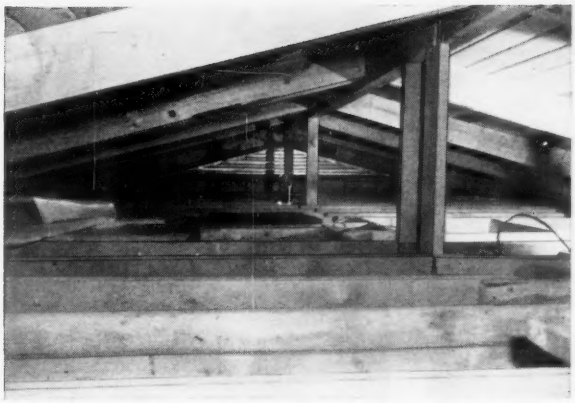


13. When using wrench to remove locking collar at base of swing spout, wrap base with tape to prevent the chrome from being marred.

14. Pair of tweezers is ideal tool for lifting out diverter valve when it is removed for cleaning or replacement. Long-nose pliers also can be used. Diverter valve is located inside the casting at the base of the swing spout.



15. If the diverter valve is damaged and must be replaced be sure to choose right type. Three shown are most common, single-lever faucets may require special type from manufacturer.

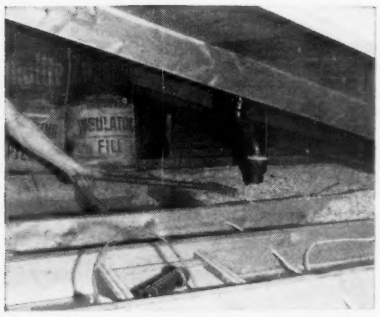


Typical of attics in many ranch-type homes, headroom at even center is limited, it is almost impossible to reach between joists at edges.

First step in insulating job is to seal spaces around pipes, light fixtures, etc. with utility-grade fiberglass mat from lumberyard.

INSULATE THE EASY WAY:

just pour



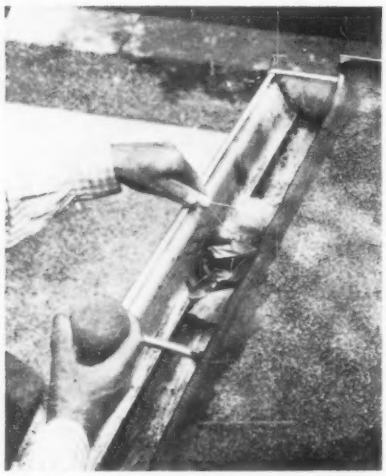
For spaces not too far from attic center short-handled rake worked well, permitted spreading vermiculite to even depth between the joists.

Longer-handle rake was used to spread insulating material in areas where headroom was limited for comfortable working.

Cardboard "rake" provided was stapled to board nailed to the end of a broom handle, permitted leveling material in cramped areas.

DESPITE THE FACT that most heat loss or gain in a home is through the roof, many homes have insufficient insulation above the ceiling. In some cases, as in the home illustrated, there is none at all! Quickest, easiest way of insulating the low attics of ranch-type homes, or increasing the thickness of settled, or insufficient insulation in any style home, is to use a pour-type, (vermiculite), insulation. The material is fireproof, vermin-resistant and flows easily around pipes, wires and other obstructions, and in voids around other types of insulation. Information on the pour-type insulation, as well as other kinds, is available from the Zonolite Inquiry Dept., 135 South La Salle St., Chicago 3. Cardboard "rakes," marked so they can be notched to produce the desired thickness of insulation are given purchasers of the insulation. △ △

Where there was reasonable amount of headroom cardboard rake was used without handle to level insulation to desired depth between joists.



Routine task for every homeowner is cleaning eaves troughs. Tree leaves generally cause most clogging, but kites, model airplanes, baseballs and odds and ends also stop water flow.

Eaves troughs are slanted to drain to downspouts, sag in trough will hold water to breed mosquitoes, cause rust and corrosion. Correct sag by using long nails driven through troughs.

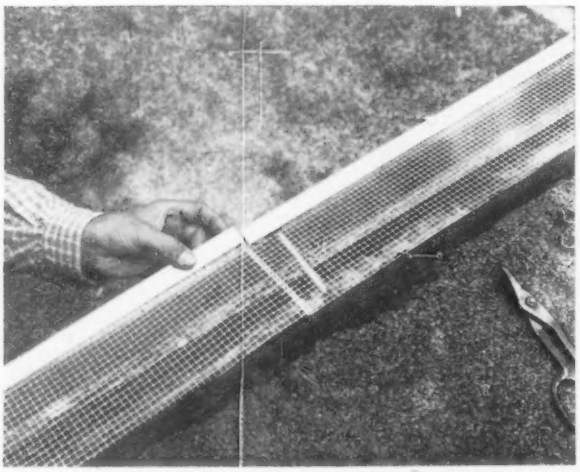
Nails 6 in. long are driven through eaves trough and metal tubes that prevent denting and collapsing of trough. Use of nails eliminates need for hangers that require fitting under shingles.

WINTERIZE YOUR HOME:

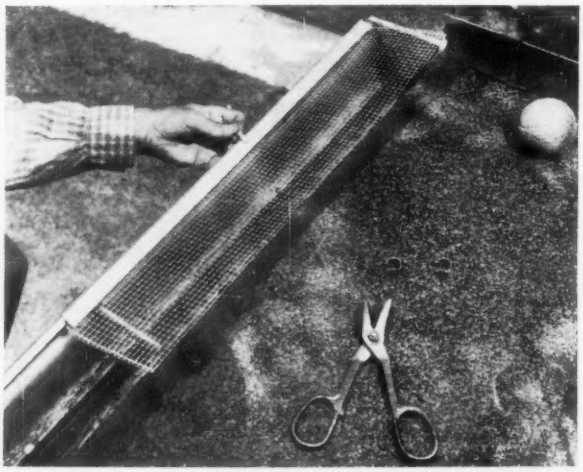
Eaves Troughs and Downspouts

RALPH TREVES

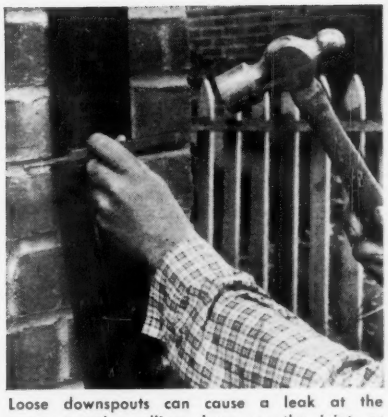
AN IMPORTANT PHASE of readying your home for winter is cleaning downspouts and eaves troughs. Tree leaves, buds, berries, a forgotten ball or two, model airplanes and broken kites must be removed. Loose hangers that cause an eaves trough to sag are either tightened or replaced with special long nails that eliminate the need for removing and replacing the bottom line of roofing. Long steel rods or wire are used to clear downspouts, with particular attention paid to the elbows at the bottom. Leaf guards over downspouts are all right, but where there is a problem of many leaves continuous screen sections are the answer. They are fairly expensive, but need be used only where experience shows an accumulation of leaves and debris can be expected. And the cost can be balanced against unwelcome and sometimes frequent trips up a ladder to the roof to clean clogged eaves troughs that are pouring water down the sides of the house to ruin paint and cause leaks around doors and windows. When eaves troughs must be removed for major repair or replacement, clean the trim behind the eaves trough and give it a couple of coats of paint. △ △



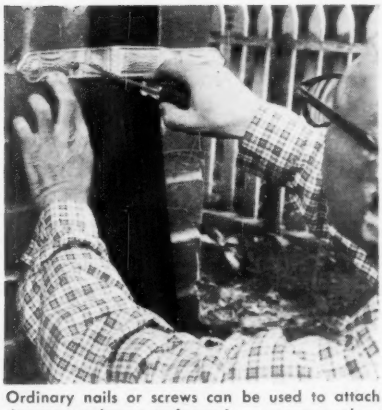
Sections of screening cover trough, wet leaves wash off in rain, blow off when dry. Galvanized-metal screens can be used on aluminum troughs because of special insulating barrier strip.



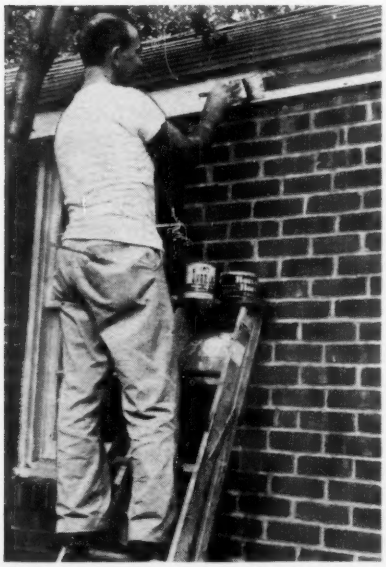
Inner edges of screen sections are slipped under bottom row of shingles or roofing material, outer edges are attached to eaves trough with spring clips furnished with sections.



Loose downspouts can cause a leak at the eaves trough, pulling down on the joint or twisting. Old clamps should be refastened, new clamps added where necessary.



Ordinary nails or screws can be used to attach downspout clamps on frame home, screw anchors in holes bored with star drill in brick walls.



When eaves troughs are taken down for repair, or to re-set for better pitch toward downspouts, scrape and paint fascia before replacing trough.

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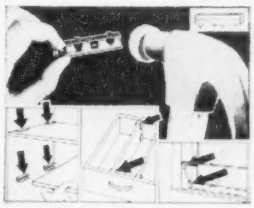

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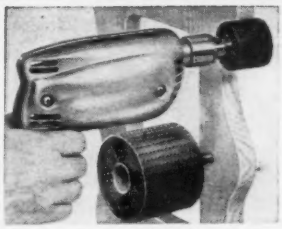

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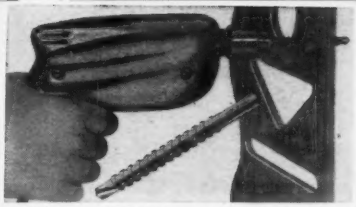

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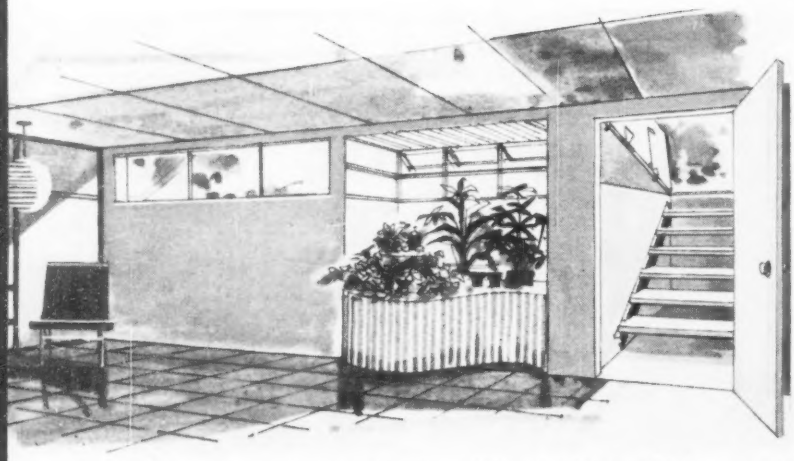
Plan Your Basement Remodeling



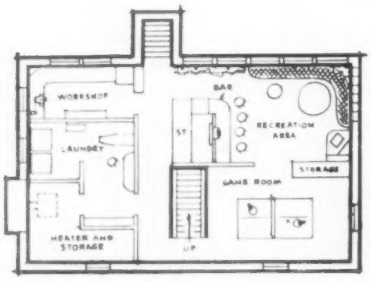
In this photo and one above are shown how addition of "ribbon" of windows can add light and an air of spaciousness to basement. Note handy outside stairway.

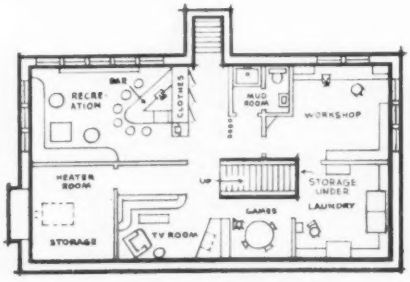
Similar to the layout at the left, this basement has wading pool in the well-lighted "bay" instead of an indoor greenhouse.

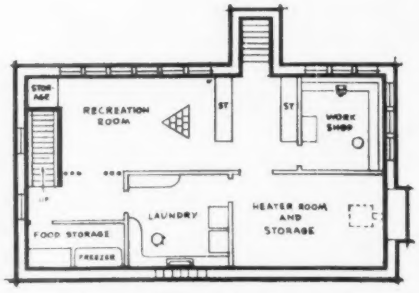
1.
INTERIOR STAIR
RUNNING
FRONT TO BACK

2.
INTERIOR STAIR
RUNNING
LENGTH OF PLAN

3.
INTERIOR STAIR
AT END OF PLAN





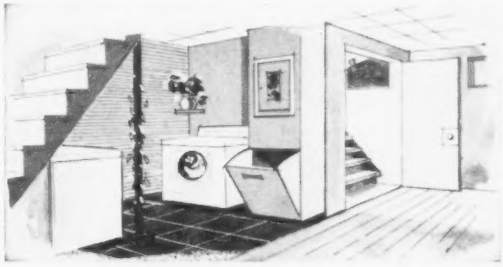


The three most common layouts in basements are shown here. Check them to see which is most like yours. The location of the inside stairway, of course, definitely effects the location of the outside stairway, and the "traffic" pattern.

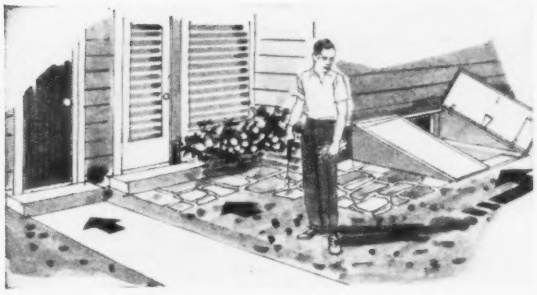
ALMOST HALF THE FLOOR AREA in many homes is represented by the basement. This space can be made as warm, dry and comfortable as the rest of the house, and thus almost double the usable area in a home. The WORKBENCH staff is now remodeling two basements and articles in future issues will show and describe how a variety of materials and building methods can be utilized by any homeowner to increase the living space in his own home.

Before you start the remodeling, you should know what your end result will be, and this means planning. How about lighting, whether natural or artificial? Will you need direct access to the back yard patio, and should the entrance be close to your workshop to permit carrying in large pieces of lumber and plywood, or would it be just as convenient opening into the recreation room? You know that a laundry room must be close to a water supply, but keep in mind that a darkroom also should be near water pipes, to eliminate the need for extensive plumbing. Would a basement shower or powder room be handy, to eliminate the need for youngsters to track through the house after playing in the mud? That same room would be a great convenience for guests at parties held in the recreation room. For even more planning ideas send 25 cents to cover handling and postage to the Bilco Co., New Haven 5, Conn. for their booklet "Basement Pre-planning", which contains 38 different ideas. △ △

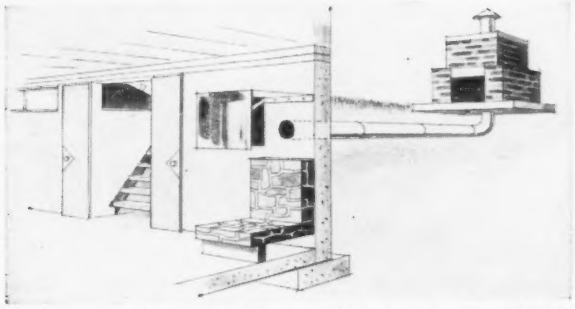
When considering the remodeling of a basement, keep in mind that a fireplace, either a pre-fab' unit, or one made by you, can be installed. The chimney can be run underground away from house.



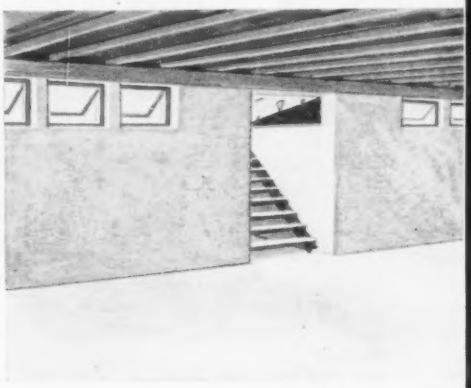
Laundry rooms can be as attractive as any area, don't forget a convenient clothes chute.

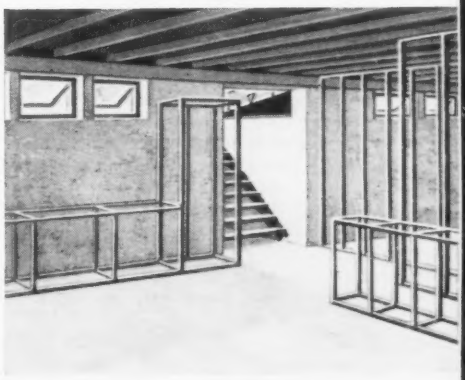


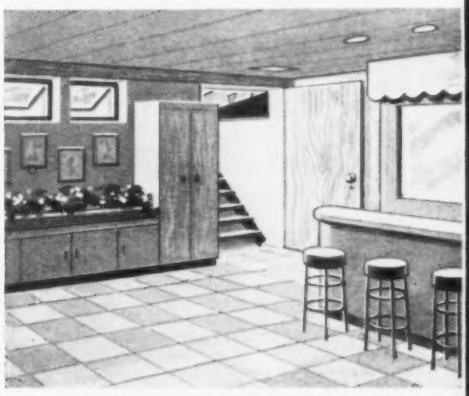
Sometimes it is best to locate outside entrance to basement so it is convenient to garage and breezeway doors.



Smoke hood over basement fireplace may be necessary, as would fan for forced draft. Smoke pipe can lead to chimney of outside barbecue.

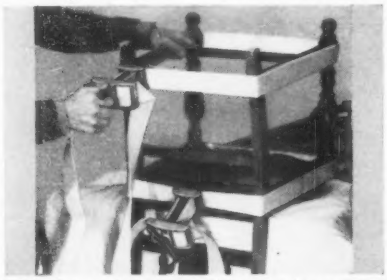




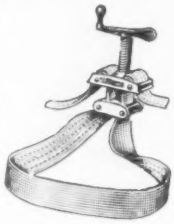


Basement remodeling can be done in steps, as indicated in three drawings. First step is to provide ample lighting, outside stairway. Second step is to frame in counters, bars and storage areas for future finishing. Final step includes ceiling and floor tile, paneling and paint.

"Jorgensen" BAND CLAMP



works when nothing else will — to clamp ROUND OBJECTS or IRREGULAR SHAPES



In one simple operation, slip band around work —apply final pressure by turning handle. Non-slip, self-locking cams hold securely. Furnished with pre-stretched canvas band — in lengths 10 to 30 ft.

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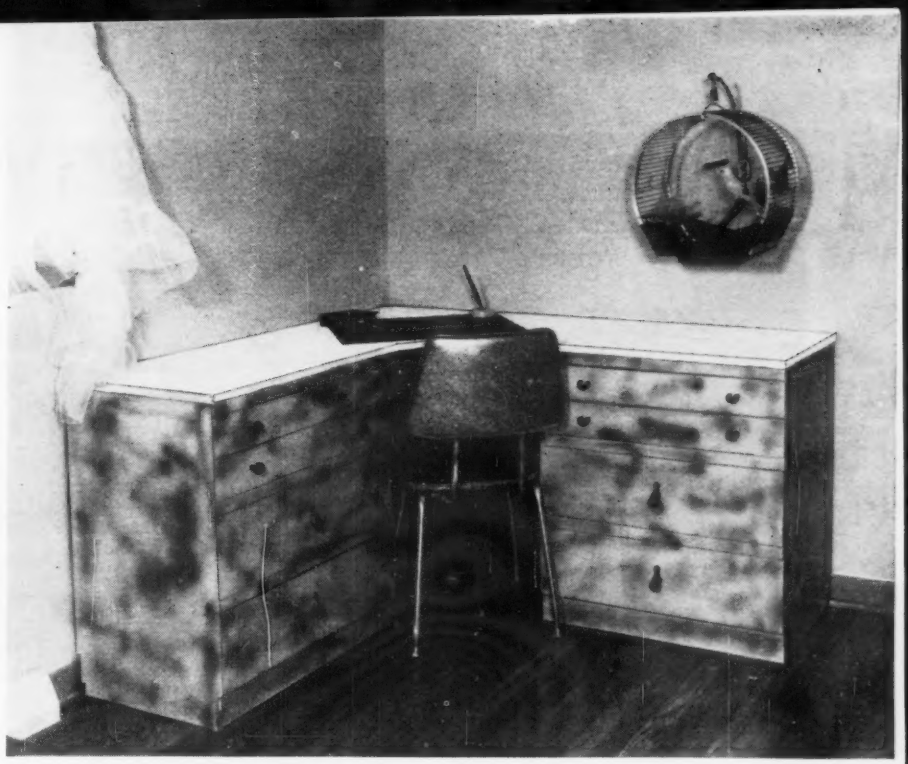
1. Space-saving and practical, this L-shaped counter is supported on two unpainted units, has wear and chemical-resistant ceramic-tile top. Multi-Lamp illuminates plywood desk area.

Built-In Furniture

DEFINITELY SPACE-SAVING, built-in furniture also can be money-saving if old furniture is modified and combined with plywood to produce a desired unit. Slightly more expensive, but time-saving, is the use of low-cost unpainted units with plywood.

In Fig. 1 is shown a built-in fitted in a boy's room. Two cabinet-type unpainted units, Fig. 2, were positioned on the walls of the room, then a piece of $\frac{3}{4}$-in. plywood was cut to fit between the units, flush with the tops. Cleats were screwed to the walls to support the back edges of the plywood top, and cleats on the sides of the unpainted cabinets supported the ends. A strip of 1 x 2 stock was glued and nailed to the front

2. Unpainted units were just desk-high, so plywood top was made flush with their tops, supported on cleats screwed to units. Strip of wood along front edge provides apron for better appearance. Walls and built-in were painted same color, beige. Tile used is brown.

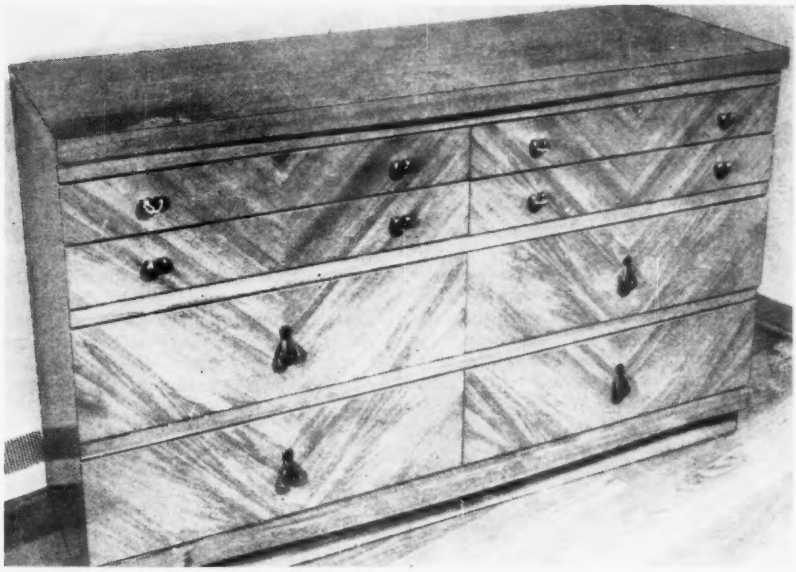


3. Halves of old dresser are joined by L-shape piece of ¾-in. plywood that is covered with plastic laminate. Dresser halves are painted same as wall, paint was used for "antiquing."

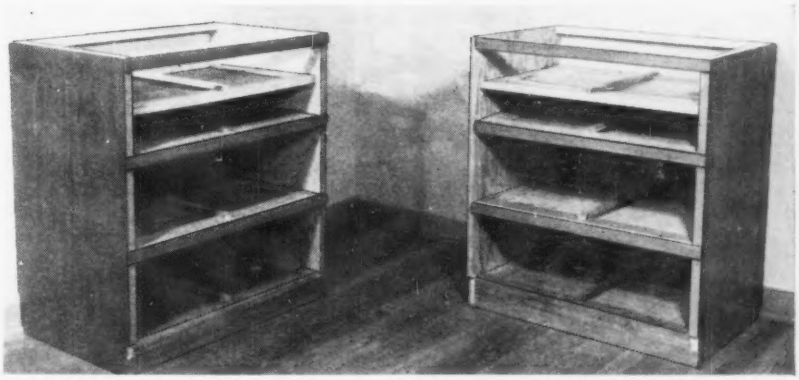
edge of the plywood top for a more finished appearance. In Fig. 2 the built-in has been given a first coat of paint, after various holes in the plasterboard had been filled with Spackling. The built-in was painted the same color as the walls to make the room look larger.

Because this is a room for a boy whose interests run from chemistry, tropical fish, bug collecting on through electronics, the top of the built-in was covered with easy-to-clean ceramic tile. A back-splash of ceramic tile was cemented to the plasterboard wall as added insurance against stained walls. An angle of 45 deg. was made at the corner of the L-shape top to provide a desk area. After the ceramic tile was cemented in place—and a space left for the desk area—a piece of plywood was cut to fit the corner area. It was sanded carefully and given several coats of varnish to assure a smooth surface for writing. The shelves above the built-in are cut from 1 x 6 stock, supported on simple wooden cleats fastened to the wall with screw anchors. The walls and built-in are painted a light beige, the ceramic tile is somewhat lighter than chocolate brown.

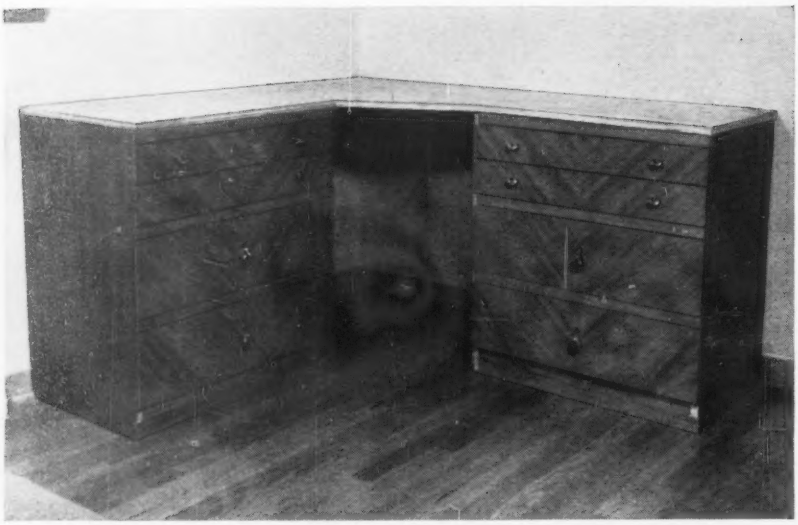
Figs. 3 through 8 show how an old dresser was salvaged and combined with a plywood top to make an attractive built-in for a girl's room. The original dresser, Fig. 4, was somewhat outdated and rather battered from use. First step was to remove the top. Second was to cut the dresser in half along the center partition. Because one half of the dresser would have no support at the center to keep the horizontal shelves in position, strips of wood were tacked to the front and back temporarily. After the dresser was cut in half a partition was cut from ¾-in. plywood and the shelves then were glued and nailed to it. A piece of curved trim on the original dresser also was removed, and its removal provided a toe space. The two halves of the dresser were then positioned on the wall, Fig. 5. It was necessary to remove portions of the quarter-round and base shoe to fit the dresser halves firmly against the wall. At this time it also was determined that



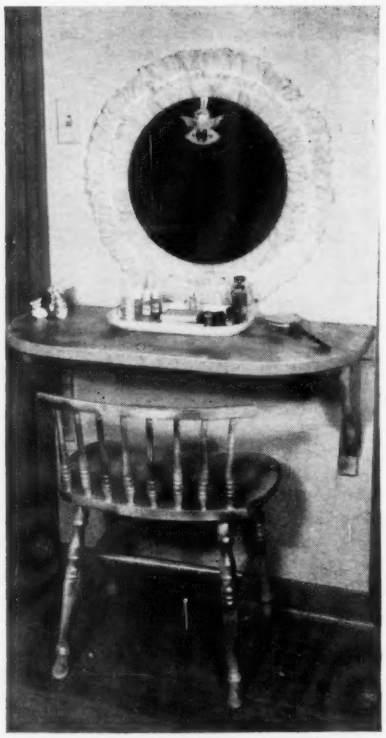
4. Very much dated, and somewhat battered from years of use, this dresser still is in good condition, joints are solid, wood is good.



5. First step was to remove top from the dresser. Second step was to carefully cut the dresser in half, on one side of the center partition. Strips of wood nailed to front and back held horizontal partitions in position until plywood side was nailed and glued to them, as on dresser half at the right of photo.



6. Dresser halves were positioned to best advantage in room, then top of ¾-in. plywood was cut to join them. Single piece was not possible from one sheet of plywood, small piece was added at left. Note also that fancy trim on lower front of dresser is removed, provides toe space.



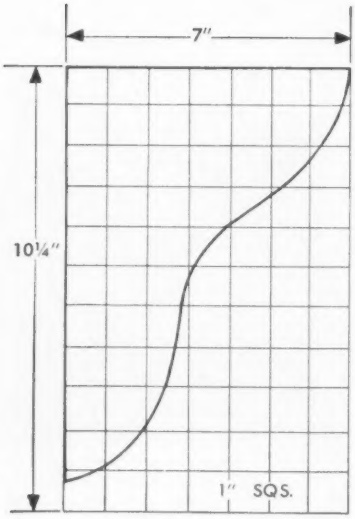
7. Original top of dresser was cut down for vanity, supported on cleat on wall, wooden brackets. Velcro tape is stapled to edge of top.

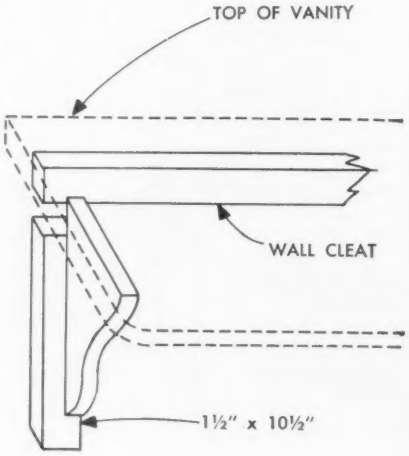
the height of the finished unit plus the thickness of a plywood top would be more than desk high, so a couple of inches were cut off the bottom of each dresser half to produce a finished height for the built-in of 30 in.

A top now was cut from ¾-in. plywood in an L-shape, Fig. 6. It was not possible to cut the complete L-shape from one piece of 4x8-ft. plywood, so a short piece was fitted on the left end, as can be seen in Fig. 6. The completed unit was painted a light blue to match the walls, then it was "antiqued" by spraying irregular patterns from a spray can of gold-color paint. Plastic laminate was cemented to the top.

The top removed from the dresser was utilized to make a vanity table to fit a short section of wall adjacent to the built-in. Support brackets were cut from scrap pieces of the top. Velcro tape was stapled to the edge of the table, and the same tape was sewn to a piece of ruffled organdy. Use of the Velcro tape permits easy removal of the material for washing. Ruffled organdy was stapled to the back of a circular mirror salvaged from another piece of furniture and the girl's room was complete. △ △

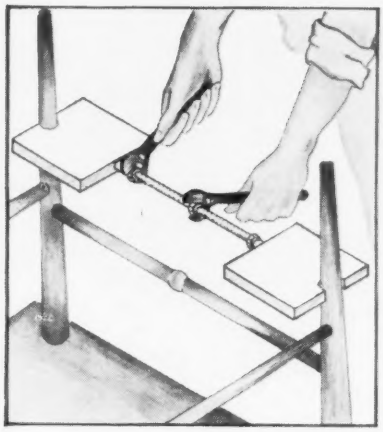
8. Ruffled material is stapled to circular mirror salvaged from discarded dresser. Ruffles held on edge of top by Velcro tape sewn to material.





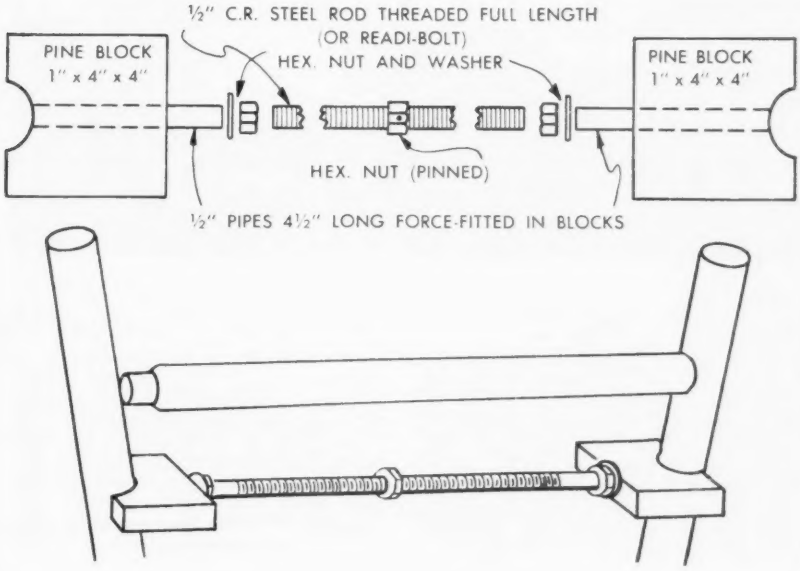
Chair "Jack"

H. C. WHEELER



THIS TOOL OR "JACK" I have used in my shop for over 20 years, as it is far superior to the use of a wooden mallet, or hammer and block of wood for disassembling furniture to be reglued. (The methods described were suggested in an article in our March-April issue on the repairing of chairs. Ed.) The tool will readily pull apart legs and stretchers that are glued and nailed, with very little damage. When legs are to be pulled from a seat, legs are clamped in vise, tool then is fitted between the bench or vise and seat bottom.

The blocks on the tool can be hardwood, although soft white pine has worked well. The bolt can be a length of threaded rod, or a piece of Readi-Bolt can be purchased. Tack-weld or pin the center nut so a wrench can be fitted on it to hold the bolt when the end nuts are turned. △ △



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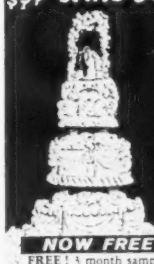

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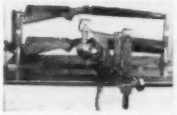

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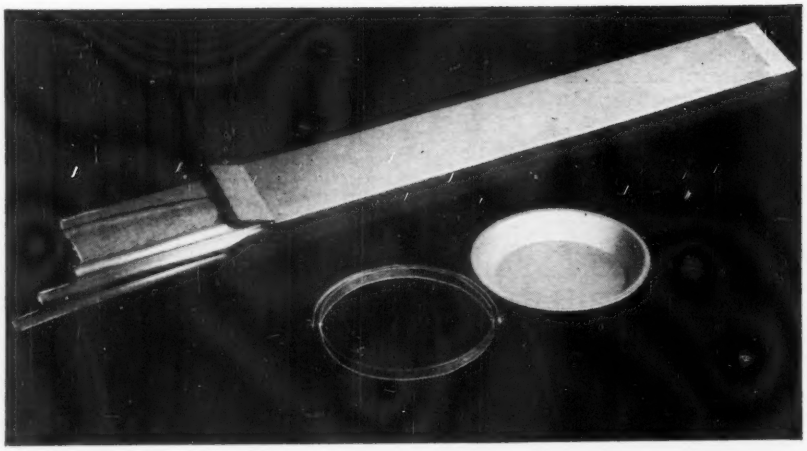

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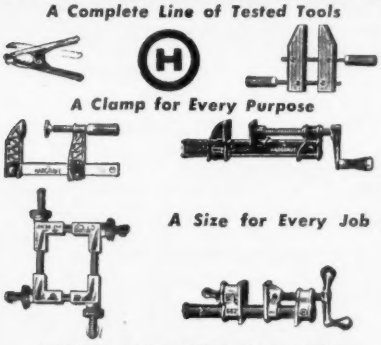

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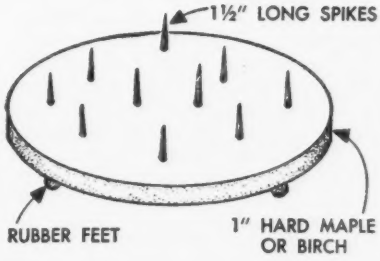
CARVING PLANK



MADE QUICKLY AND EASILY, this carving plank will keep that roast or fowl on the platter when you are carving. Cut the plank from a piece of 1-in. birch, maple or other hardwood and attach four rubber feet. The spikes can be 1½-in. lengths of 3/16-in. stainless-steel rod with points ground on one end of each. They are cemented in blind holes in the plank. Aluminum nails also can be used, driven up through undersize holes in the plank.

Make up a number of these planks in various sizes as gifts for friends who delight in outdoor cookery.

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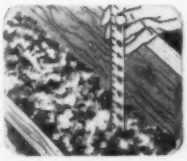

If your attic insulation is packed or shrunk, if it is less than 4" thick, you are losing heat fast. Bring insulation to the 4" level. (Utility companies recommend 6" of insulation for electrically heated homes.)

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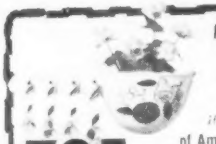

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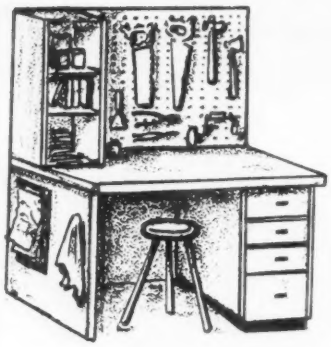

WORKBENCH RESEARCH DEPARTMENT

EACH ISSUE IN THIS COLUMN WE WILL CHOOSE QUESTIONS ON HOME AND SHOP SUBJECTS FROM LETTERS SENT TO US. ONLY THOSE QUESTIONS WHICH HAVE WIDE APPEAL WILL BE ANSWERED HERE. QUESTIONS ON SPECIALIZED SUBJECTS WILL BE ANSWERED BY INDIVIDUAL LETTER FROM THE RESEARCH EDITOR'S DESK.

Dear Research Department:

We have lived in our present home for 9 years, and I know that in that time our chimneys have not been cleaned. They seem to be in good condition and the flue liners, upon inspection, seem to be cemented tightly to each other. Do you think it would be wise to have our two chimneys cleaned, and could we do this work ourselves? —Mr. C.M.C., Oklahoma.

Dear Mr. C.M.C.:

There are, of course, companies that will handle this chimney cleaning job for you, but since you ask for details, our suggestion is that you do it yourself, for with care there is no reason why you cannot do an equally good job.

We might also point out that you are wise to consider such a cleaning, if for no other reason than preventative maintenance. Cleaning reduces the soot accumulation that is inevitable in a chimney and thus the possibility of soot catching fire, the smoother the inside walls the more efficient the stack becomes.

Cleaning a chimney is not very hard, it's just a dirty job. However, before starting the cleaning, very carefully seal all openings, such as fireplaces, within the house. Soot is difficult to clean up and with care there is no need to be plagued with this chore later. One way of sealing fireplaces is to use a cardboard the size of the opening, with light wood strips tacked around the edge for strength. Seal the joint between cardboard and fireplace with wet cloths to make it as near airtight as possible. Have damper open.

To remove soot from the chimney take a burlap bag and partially fill it with gravel, old tire chains, pebbles or other similar material. Attach a rope securely—a rope long enough to reach the length of the chimney. From the top, slowly raise and lower this bag in the chimney, constantly working toward the bottom. This scrubbing action is very effective in removing the accumulated deposit of soot and does a far better job than any of the chemical powder cleaners that can be put on a fire.

Use extreme care when removing the soot from the fireplaces. First, wait several hours to allow complete settling, then remove the cardboard cover carefully, finally shovel up the soot as if it were your best china! Soot is light and it doesn't take much of an air current to start it traveling around a room.

Dear Research Dept.:

I have ceramic tile on the hearth of my fireplace in the living room. I regularly wax it when I wax the floors, yet over a period of time it seems to have lost its luster and almost seems grimy. What's wrong? Do I have an inferior tile?—Mrs. E.H., Iowa.

Dear Mrs. E.H.:

Let us assure you that your tile is probably all right; what is happening is what always will happen when ceramic tile is waxed. All tile manufacturers recommend the following for regular tile maintenance: clean with a detergent and damp mop.

Your tile can be restored to its original beauty, however, by a vigorous application, by hand, of steel wool and detergent to remove all traces of the wax. This will not hurt the tile surface. Thereafter clean as recommended above.

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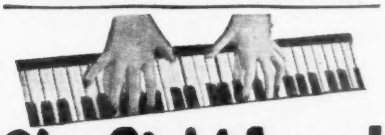

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Actually, one of the main advantages of ceramic tile is that it does not have to be waxed.

Dear Research Dept.:

I have had quite an argument with a friend about the difference between a "tint" and a "shade" of a color. I have maintained that a tint is made by adding white to a paint color, thus lightening it; that to shade you add black to darken the color. Am I correct? Also on this subject, what is a "tone?"—Mr. R.D., Massachusetts.

Dear Mr. R.D.:

You win your argument—your definition is correct. For instance, adding white to red paint would produce a pink (lighter) tint. And adding black would produce a darker "shade."

"Tone" refers to the degree of reflectivity in a color. Tone is changed by adding black or white to a color.

Dear Research Dept.:

We are thinking about painting our house and we have a number of questions we would like answered. Will appreciate any information you can give.

1. Is fall as good a time or better than spring for painting? We have heard many pros and cons on this.

2. What do you think about the new water based—latex—house paints? How do they stand up, are they any easier to apply?

3. How long should a paint coat

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MASTERCRAFT PLANS, Dept. 92B
7041 Olcott Avenue Chicago 31, Illinois

last? Does a white powder that comes off the surface indicate a cheap paint?
4. Final question: application. What's best: brush, roller, spray gun?
Mr. M.J.O'D., Alabama.

Dear Mr. M.J.O'D.:

You may not realize it, but you've posed some pretty good questions. Unfortunately, there are several answers to every question, too. However, we'll do our best to give you some facts that may help you to answer your questions, particularly in the light of your own experience, present paint condition of your home, and how much you wish to invest in the job. Taking your questions in order, our answer to No. 1 is that many authorities feel that fall is a better time to paint. Reason is that wood has dried out over the summer, thus providing a better basic surface, and there are fewer bugs and insects in the air to stick on the surface. Other folks argue that it is nicer to paint in the spring so that everything is spick and span for the summer. Suit yourself. We would pick the fall.

Your next question concerns the new latex house paints. Again, this cannot be a clear-cut answer but here are some facts concerning these new paints. Claims for the water based paints include a life expectancy of up to 50 per cent longer than conventional paints. However, the coverage per gallon is not as much and the price is anywhere from 10 to 20 per cent more than a good oil-base paint. They are quick drying, don't show lap marks, are more fade-resistant and somewhat easier to apply. These are definite plus values for the do-it-yourselfer, no question about it. A drawback is the strict attention to instructions on the can when applying. If a latex paint is not applied just right, it turns out to be a mess. And manufacturers are worried about this. Although the ads paint in glowing terms a picture of painting right after a rain, washing out the brushes in soapy water, and almost by the time the painter is cleaned up and ready to relax the job is dry, there is a little more to it than this. A turpentine-based primer must be applied first and allowed to dry for three days or so, so there's still this mess to go through. Still, the facts are, the new water based paints are good, they last longer, hold their colors longer, are somewhat easier to apply—if you carefully follow instructions. They cost more and still require an oil-based primer. Your next question concerns life of a paint coat. This is variable, but a good job with quality paint should last up to six years before repainting is necessary; oil paint, that is. The white powder that comes from an outside painted sur-

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face does not necessarily mean a cheap paint. Good outside paints (oil) are designed to "chalk" or "powder" off during the course of their life to be "self-cleaning." Excessive "chalking" does indicate lower grade, however. This chalk should be removed by vigorous wire brushing before repainting.

Your question on application is a stickler. It really depends upon you. Here are some points to consider: Spraying does a good job if you know how to spray, otherwise you will be pestered with runs (from too much in one spot) or thin areas where enough was not applied. In many areas the overspray problem could be serious. By this we mean that some of the spray floats onto shrubs, cars, other houses! And finally, the very careful masking around windows, etc., sometimes eats up all the time saved in the spray process.

Rollers, in many ways, are a natural for the homeowner-painter. They can be obtained in a variety of widths and naps, can be fitted with extra long poles to reach high spots. Although it takes a little practice to handle a long-poled roller, this knack comes, and the work can progress rapidly. One-story homes are "duck soup" for this system. The type of surface might determine the feasibility of a roller, although rollers have been satisfactorily used on almost every type of surface.

The brush is the old standby. A few suggestions here: get the best brush possible—the quality of the job depends directly upon the quality of the brush. It is also surprising how much easier a good brush is to use, how it holds paint better and helps to speed up the job. Use a 4-inch brush for flat wall surfaces, for trim a 2- or 3-inch brush.

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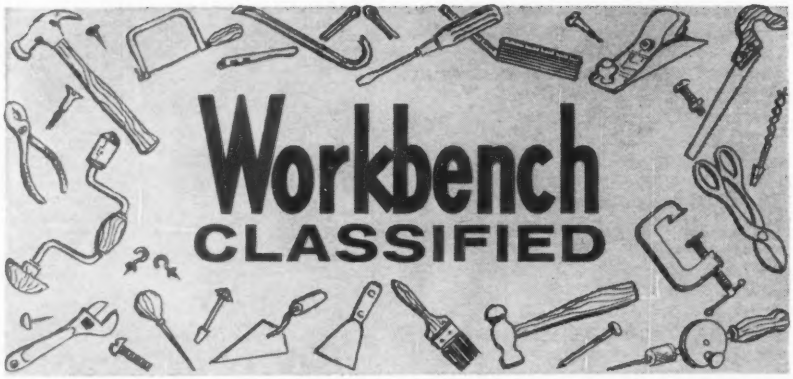

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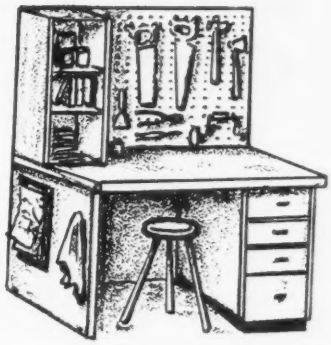
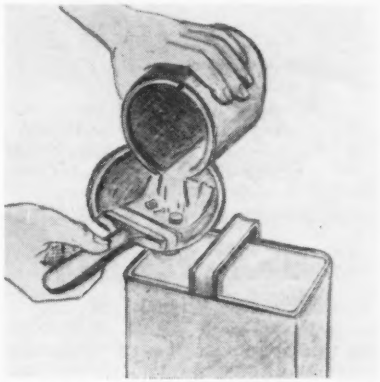


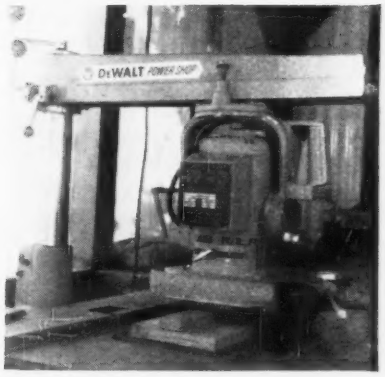
WORKBENCH SHOP TIPS

Paintbrush "Strainer"



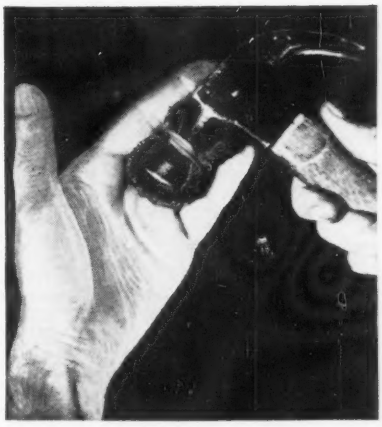
When using cleaning fluid to wash small parts, much of the residue can be removed from the fluid by pouring it through a paintbrush as indicated. Place the brush over the funnel when pouring the liquid back into the container. Parts that have been overlooked will be recovered.
Daniel Bousha, Jackson, Mich.

Saw Is Large Clamp



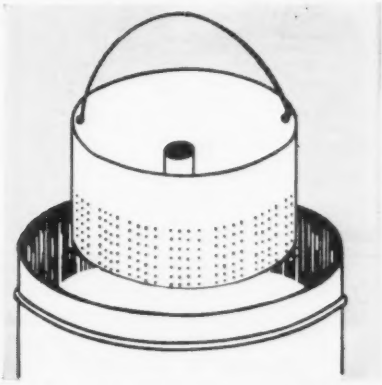
Need an oversize clamp with enormous pressure? If you own a radial-arm saw you have one. Tilt the motor 90 deg., as shown, place the work to be clamped under it and lower the arm.
Jerry Parker, Sonoma, Calif.

Sponge Pads Hammer's Face



When in need of a wooden or rubber mallet and there's none on hand, an ordinary hammer can be easily made to serve. Just fold a strip of sponge rubber over the hammer's face and secure it with a rubber band as shown in the photograph.
John A. Comstock, Wellsboro, Penna.

Coffee-Pot Parts Cleaner



The basket from a discarded coffee percolator makes an excellent washer for cleaning small parts. Fitted with a wire handle, the basket allows small parts to be doused up and down in cleaning fluid with little chance of being lost. The fluid drains readily from the basket when the parts are to be dried after cleaning.
Howard E. Moody, Upper Jay, N. Y.

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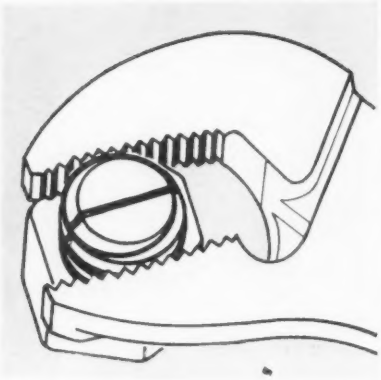
Easy Nut Removal



If parts bolted together are to be exposed to weather, slot the threaded ends of the bolts with a hacksaw. When the nuts have to be removed, and have become "frozen" with rust, pinch the slotted ends together. This will break away the rust, releasing the nut.

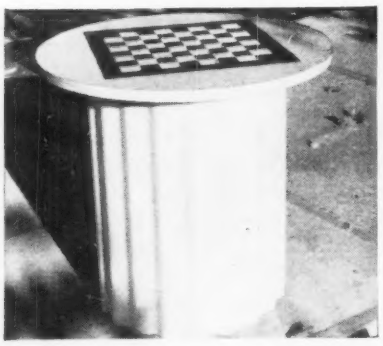
Daniel Bousha, Jackson, Mich.

Small-Parts "Catch-All"

Minimize the chance of losing small parts when sitting at a table and working on items with miniature components by making your lap "leak-proof." If there is a drawer at the center of the bench, open it and fit one end of a towel or large cloth in it and close the drawer. Spread the cloth over your lap. Any items that fall now will land in the cloth and can be recovered easily.

Herbert Davis, San Pedro, Calif.

Fiber-Glass Table



The marble-like base of this indoor-outdoor table consists of two scrap pieces of 26-in.-width fiber glass roof panels bolted together. Table is 24 in. high, has a plywood top 24-in. in diameter. Smaller plywood disk 14 in. in diameter is screwed to underside of table top to provide means of using contact adhesive to hold fiber glass to top. Checkerboard on table top is made from colored plastic tape.

Jerry Parker, Sonoma, Calif.

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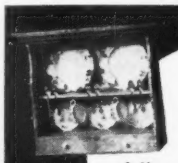

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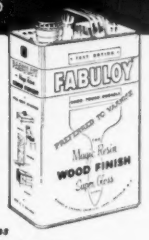

Applies easily, flows on smoothly without brush marks. Dries fast to a brilliant, crystal-clear, mirror-like finish of exceptional durability. Resists chipping, won't yellow.

At paint, hardware and lumber stores coast-to-coast. For free booklet, write Dept. W9

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Brush Cleaner

Cleans Fast

No mixing, no long soaking of brush. Leaves bristles like new—glossy, springy—never flabby. Effective on hardest caked paint and other finishes. At paint and hardware stores

● Send 25c for illustrated Refinishing Manual or write for free folder "Care of Paint Brushes."
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For an interesting and Profitable Hobby, make and sell Jig Sawed Toys, Novelties, and Ornaments.
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S. LYNDS — PATTERNS
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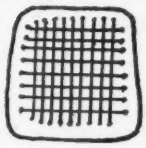

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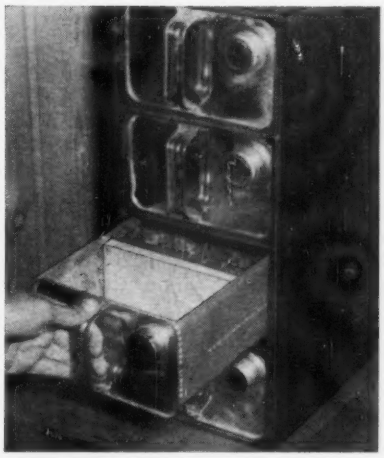
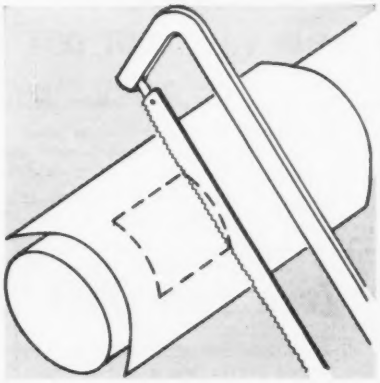


Convenient drawers for nails and small parts can be made by cutting out one side of 1-gal. tins, such as used for turpentine, paint thinner and the like. Bend down the cut edge to provide extra strength and eliminate sharp edges. A simple cabinet can be made from ½-in. plywood, as shown. The handles of the tins are used as drawer handles.
Wilber H. Fulker, Colorado

Metal-Cutting Tip



Cutting square or rectangular holes in sheet metal can be done neatly and simply with this trick: Mark the opening, then bend the metal over a wooden cylindrical shape. Cut the two sides with a hacksaw, then turn the workpiece 90 deg., bend it on the curve again and saw the other two sides.
Howard E. Moody, Upper Jay, N. Y.

Frame-Painting Tip

When painting a picture frame, nail a light strip of wood across the back of two of the sides. You then can hold this strip while painting the entire frame, including the edges.
A. Zawistowski, Coon Rapids, Minn.

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WELD-BRAZE-SOLDER-CUT Complete

NO OTHER WELDER AT THIS PRICE Complete with **SAFETY FOOT SWITCH, FULL FACE SHIELD**, twin carbon arc torch, welding rod holder, clamp, carbons, welding & brazing rods, flux, fuses, instruction book. **FULL YEAR GUARANTEE.** More than a quarter million in use in homes, garages, farms, shops, factories. **NOW** anyone can weld, braze, solder, cut, heat, without experience. Does 1001 jobs on all metals. Save & earn money. Make & repair auto bodies, parts, fenders, trailers, boats, metal furniture, fixtures, ornamental iron, farm equipment, garden tools, bicycles, toys, etc. Operate on any properly wired 110 V AC line. **SEND ONLY $2.** Pay postman $12.95 plus C.O.D. charges. Ideal lifetime gift for hobbyist, mechanic, hot rodder, homeowner. Order on 10-day money-back guarantee.

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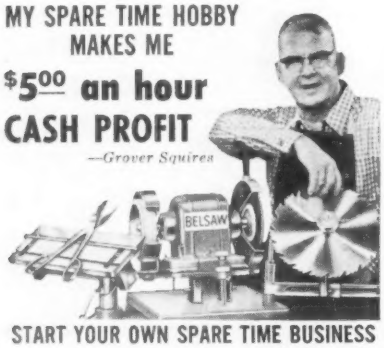

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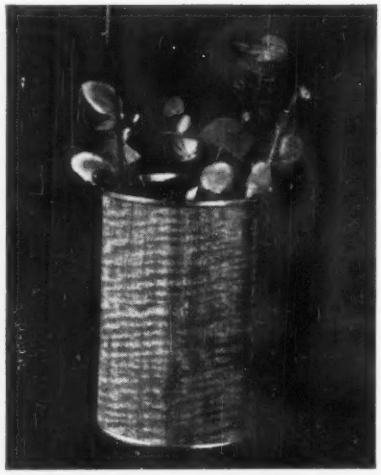

THIS TIN that held pork and beans has been glamorized with fiddle-back maple to become a "vase." How was it done? A new type contact adhesive for veneering makes it possible to add the richness of exotic woods to practically any surface. No clamps or hold-down devices are needed. We shortly will run a complete article on using this interesting adhesive and wood veneers, available from Albert Constantine and Sons, 2050 Eastchester Rd., New York 61, N. Y.

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If you live in one of the 106 cities in the United States which use delivery zone numbers for mail delivery, please include your zone number in all correspondence with WORKBENCH. And wherever you live, your mail will be delivered faster to correspondents in those 106 cities when the address includes the zone number. Ask your correspondent for his zone number. A zone number is part of the address, specific, easy to read, simplifies handling and speeds delivery of mail. Ask your local post office if your city is one of the 106 which use delivery zone numbers. If it is, ask for your zone number. Use it on printed stationery, cards, advertisements and in your return address. The zone number of WORKBENCH is 11. So our complete address is WORKBENCH, 543 Westport Road, Kansas City 11, Missouri. Remember: You get better mail service by using zone numbers. Zone all mail.

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3x25 American Floor, etc.	3.95	"
3x27 Porter Cable, etc.	3.95	"
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4x27 Porter Cable, etc.	5.50	"
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But don't make any decision now. Read the Plan **first**—entirely at my risk. Then—after you have made a careful investigation—after you have talked things over with your family—only then do you decide what you want to do.

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RUBBER STAMP DIVISION, Dept. R-6K,
1512 Jarvis Avenue, Chicago 26, Illinois

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1512 Jarvis Avenue, Chicago 26, Illinois

Please rush full particulars. Tell me about your financing plan and about the little machine that can get me started in the profitable Rubber Stamp Business at home in spare time. Everything you mail me is FREE. No salesman will call.

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ADDRESS_____

CITY_____ZONE____STATE_____